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# THE FESTIVUS

A publication of the San Diego Shell Club

ISSN: 0738-9388

Volume: XXII

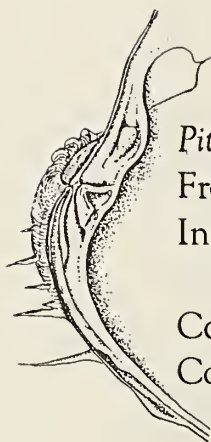
May 9, 1991

Supplement 2 (1990)

## Additions to the Panamic Province Bivalve (Mollusca) Literature 1971 to 1990 //



Carol Skoglund //



*Pitar (Hysteroconcha) lupanaria* (Lesson, 1830)

Front cover: exterior of left valve

Inside cover: detail showing dentition

Cover illustrations: Wesley M. Farmer

Cover design: Suzanne H. Parlett

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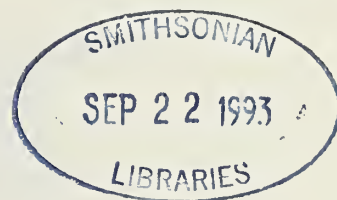
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## ADDITIONS TO THE PANAMIC PROVINCE BIVALVE (MOLLUSCA) LITERATURE - 1971 TO 1990

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A great many changes have occurred in the Panamic Province literature since A. Myra Keen's mammoth SEA SHELLS OF TROPICAL WEST AMERICA was published in 1971. New species have been named, taxonomic relationships redefined, and geographic distributions better understood. The purpose of this paper is to draw together as many bivalve citations as possible and tie them to the fauna at the species level so that each reader can make his/her own final judgments. Earlier papers in this series cover the Polyplacophora (Skoglund, 1989) and the Opisthobranchia (Skoglund, 1991a).

The Panamic Province lies along the Pacific coastline of the Americas between latitude 25°N and 6°S. There are many references to "Baja California," Mexico, in the literature of the Province. The correct names of the two political divisions of the peninsula are Baja California, the state north of the 28th parallel, and Baja California Sur, the state south of the 28th parallel. Previously published references to Baja California Norte are listed herein as Baja California.

A special effort has been made to include records of occurrence in the major offshore islands, including the Islas Revillagigedo, Mexico; L'île Clipperton, France; Isla del Coco, Costa Rica; and the Islas Galápagos, Ecuador.

Suprageneric taxa have been rearranged by several workers since 1971, including Waller (1978), Yonge & Morton (1980), Morton (1981), Boss (1982), Allen & Hannah (1986), Maxwell (1988) and Vaught (1989). Because this paper is meant to be used with Keen (1971), the original order Keen used has been preserved wherever possible. Numbers from Keen are used when available, but may no longer be in numerical order because some changes are unavoidable.

Only those species with changes since 1971 are included. Species are listed alphabetically within a genus. Taxa that differ from those given in Keen

(1971) are in bold type. Authors and publication dates are given only for those higher taxa in bold type. Synonyms are listed as published by each author, with the exception that those shown in Keen (1971) are not repeated. Where authors disagree, both versions are shown in the order they were published.

Most distributional records have been included, but be aware of the possibility of errors in shell identifications.

Many of the taxonomic changes in the Panamic Province literature are a result of Bernard's 1983 work on the bivalves of the eastern Pacific Ocean. Some of his citations, however, have not been used here because he overlooked significant earlier papers. Many of the new distributional records herein have so been taken from Bernard. His distributions are given only by approximate latitudes, such as 28°N-45°N. The northern boundary of the Panamic Province is usually considered to be Bahía Magdalena (about 25°N) on the west coast of Baja California Sur, and 31°N at the head of the Gulf of California (Table 1). Because a record of 28°N, for instance, could be either within the Gulf and therefore part of the Panamic fauna, or on the west side of Baja California and outside of the Panamic Province, some ambiguous Bernard distributions have not been included.

I thank those who have contributed to this paper. Dr. Eugene V. Coan, Jules & Carole M. Hertz, Walter E. Sage III, Paul H. Scott, Dr. Donald R. Shasky and Kay C. Vaught called citations to my attention. Gladys Weber and Virginia Upton edited early drafts. A special thanks to Dr. Coan who critically read the manuscript and offered many valuable suggestions.

Please call omissions and corrections to my attention, as there are bound to be citations I have missed.

Baja California		Mexican Mainland to Peru	
<u>West Coast</u>	<u>East Coast</u>	Latitude	
Ensenada		32°N	
	San Felipe	31°N	Puerto Peñasco, Sonora
	Bahía de los Angeles	29°N	Bahía Kino, Sonora
Isla Cedros		28°N	Bahía San Carlos, Sonora
		28°N	Guaymas, Sonora
	Bahía Santa Inez	27°N	
Bahía Magdalena		25°N	
	Bahía La Paz	24°N	
Cabo San Lucas		23°N	Mazatlán, Sinaloa
		20°N	Bahía Chamela, Jalisco
		17°N	Acapulco, Guerrero
		15°N	Golfo de Tehuantepec
		11°N	San Juan del Sur, Nicaragua
		10°N	L'île Clipperton (France)
		10°N	Nicoya, Costa Rica
		9°N	Kobbe Beach, Panama
		6°N	Isla del Coco, Costa Rica
		5°N	Bahía Cueva, Colombia
		0°	Islas Galápagos, Ecuador
		2°S	Santa Elena, Ecuador
		6°S	Punta Aguja, Peru

Table 1. Approximate latitudes of major text sites

- 
- |  |   |
|--|---|
| <p>Class BIVALVIA<br/> Subclass PROTOBRANCHIA<br/> Follows Maxwell (1988)<br/> Order SOLEMYOIDA<br/> Suborder SOLEMYINA Dall, 1889<br/> Superfamily SOLEMYACEA<br/> Family SOLEMYIDAE<br/> Genus <i>Solemya</i> Lamarck, 1818<br/> Subgenus <i>Petrasma</i> Dall, 1908</p> | <p>other species (Bernard, 1980). Length: 47.3 mm (Draper, 1987).</p> |
|--|---|
- |   |   |
|---|---|
| <p>2 <i>Solemya</i> (<i>P.</i>) <i>panamensis</i> Dall, 1908. Shell interior figured showing that the prop supporting the "chondrophore" is anterior to the posterior adductor scar (Gemmell, Myers &amp; Hertz, 1979). Distribution: Oaxaca, Mexico, to Panama. More northern records are of</p> | <p>3 <i>Solemya</i> (<i>P.</i>) <i>valvulus</i> Carpenter, 1864. Extend distribution to San Felipe, Baja California, Mexico. Shell interior figured (Gemmell, Myers &amp; Hertz, 1979). Distribution: 21°N-33°N. Depth: 2-400 m (Bernard, 1983a).</p> |
|---|---|
- |         |   |
|---------|---|
| <p></p> | <p>Family ACHARACIDAE<br/> Scarlato &amp; Starobogatov, 1979<br/> Genus <i>Acharax</i> Dall, 1908<br/> Raised from subgenus (Bernard, 1983a; Allen &amp; Hannah, 1986).</p> |
|---------|---|
- |         |  |
|---------|--|
| <p></p> | <p>1 <i>Acharax johnsoni</i> (Dall, 1891). Add synonyms: <i>Solemya tokunagai</i> Yokoyama, 1925; <i>S. (Acharax) tibai</i> Kuroda, 1948 (Bernard, 1983a).</p> |
|---------|--|

Suborder NUCINELLINA  
 Scarlato & Starobogatov, 1971

Superfamily MANZANELLACEA Chronic, 1952

Family NUCINELLIDAE

Genus *Nucinella* Wood, 1851

Subgenus *Nucinella*, s. s.

- 64 *Nucinella* (*N.*) *subdola* (Strong & Herlein, 1937). Transferred to family Manzanellidae (Abbott, 1974). As family Nucinellidae (Bernard, 1983a). Depth: 35 m (F. & L. Poorman, 1988).

Subgenus *Huxleyia* A. Adams, 1860  
 Changed from genus (Allen & Hannah, 1986).

- 65 *Nucinella* (*H.*) *munita* (Dall, 1898). Delete. Distribution (33°N-45°N) is north of the Panamic Province (Bernard, 1983a).

Order NUCULOIDEA

Superfamily NUCULACEA

Family NUCULIDAE

Subfamily NUCULINAE Gray, 1824

Genus *Nucula* Lamarck, 1799

Allen & Hannah (1986) treat *Lamellinucula* Schenck, 1944, as a synonym of *Nucula*. Maxwell (1988) makes it a subgenus of *Nucula*.  
 Subgenus *Nucula*, s. s.

- *Nucula* (*N.*) *carlottensis* Dall, 1897. As subgenus *Lamellinucula* by Bernard (1983a). Synonym: *Nucula darella* Dall, 1916. Distribution: Alaska to Cabo San Lucas, Baja California Sur, Mexico. Depth: 1500 to 2600 m (Bernard, 1983b).
- 12 *Nucula* (*N.*) *chrysocoma* Dall, 1908. As genus *Pronucula* by Knudsen (1970). Change ending from *chrysocome* (Keen & Coan, 1975). Add subgenus. Distribution: 7°S-45°N (Bernard, 1983a).
- 4 *Nucula* (*N.*) *declivis* Hinds, 1843. Depth: 35 m (F. & L. Poorman, 1988).
- 6 *Nucula* (*N.*) *iphigenia* Dall, 1908. Synonym: *Nucula iphigenia azulesensis* Olsson, 1942 (Bernard, 1983a).
- 8 *Nucula* (*N.*) *schlencki* Hertlein & Strong, 1970. Extend distribution across Gulf of California

to Cabo Tepoca, Sonora, Mexico (Skoglund, 1974).

- 15 *Nucula* (*N.*) *taeniolata* Dall, 1908. Add subgenus (Bernard, 1983a).

Subgenus *Lamellinucula* Schenck, 1944

As a synonym of *Nucula* (Allen & Hannah, 1986), and as a subgenus (Maxwell, 1988).

- 5 *Nucula* (*L.*) *exigua* (Sowerby, 1833). Synonym: *Nucula suprastrata* Carpenter, 1903 (Hertlein & Grant, 1972). Subgenus changed from *Nucula* (Bernard, 1983a).
- 7 *Nucula* (*L.*) *paytensis* (A. Adams, 1856). Extend distribution north to Esmeraldas Province, Ecuador (Cruz-P., 1977). Subgenus changed from *Nucula* (Bernard, 1983a).

Subfamily NUCULOMINAE Maxwell, 1988

Genus *Ennucula* Iredale, 1931

Raised from subgenus (Woodring, 1973). Allen & Hannah (1986) use *Nuculoma* Cossmann, 1907, with *Leionucula* Thiele, 1934, and *Ennucula* Iredale, 1931, as synonyms. Maxwell (1988) regards *Nuculoma* for fossil species only, and *Ennucula* as the genus for extant species.

- *Ennucula cardara* Dall, 1916. Distribution: 23°N-48°N (Bernard, 1983a).
- 9 *Ennucula colombiana* Dall, 1908. Subgenus as *Leionucula*. Chilean specimens should be assigned to a new species and *N. colombiana* reserved for shallow water tropical representatives (Bernard, 1983a). Drawings of holotype. Length: 6 mm. Depth: 11 to 25 m. Extend distribution north to San Felipe, Baja California, and to Guaymas, Sonora, Mexico (Gemmell, Myers & Hertz, 1987). Depth: 35 to 100 m (F. & L. Poorman, 1988).
- 10 *Ennucula linki* Dall, 1916. Subgenus as *Leionucula*. Distribution: 28°N-34°N (Bernard, 1983a). Distribution: Tillamook, Oregon, to central Mexico. Confined to shallow water (Bernard, 1983b).
- 13 *Ennucla panamina* Dall, 1908. Length: 22 mm. Valve interior and hinge teeth figured. Distribution: 6°N to 31°N. Depth: 1975 to 3058 m (Knudsen, 1970). As subgenus *Leionucula* by Bernard (1983a).

## Superfamily NUCULANACEA

## Family NUCULANIDAE

## Subfamily NUCULANINAE

H. &amp; A. Adams, 1858

Genus *Nuculana* Link, 1807

Synonyms: *Costelloleda* Hertlein & Strong, 1940; *Politoleda* Hertlein & Strong, 1940; *Thestyleda* Iredale, 1929 (Allen & Hannah, 1986).

Subgenus *Nuculana*, s. s.

- *Nuculana* (*N.*) *amblia* (Dall, 1905). Distribution: 19°N-37°N (Bernard, 1983a).
- 16 *Nuculana* (*N.*) *costellata* (Sowerby, 1833). Extend distribution north to Bahía San Felipe, Baja California, Mexico (Gemmell, Hertz & Myers, 1980). Distribution: 4°N-27°N (Bernard, 1983a). Subgenus changed (Allen & Hannah, 1986).
- 30 *Nuculana* (*N.*) *hamata* (Carpenter, 1864). Synonym: *Leda hamata limata* Dall, 1916. Depth: 35 to 550 m (Bernard, 1983a). Subgenus changed (Allen & Hannah, 1986).
- 34 *Nuculana* (*N.*) *loshka* (Dall, 1908). Subgenus *Thestyleda* added (Bernard, 1983a). Subgenus changed (Allen & Hannah, 1986).
- 17 *Nuculana* (*N.*) *marella* Hertlein, Hanna & Strong, 1940. Length: 34 mm (Draper, 1987). Subgenus changed from *Costelloleda* (Allen & Hannah, 1986). Depth: 100 m (F. & L. Poorman, 1988).
- *Nuculana* (*N.*) *peruviana* (Dall, 1908). Distribution: 6°S (Bernard, 1983a).
- 18 *Nuculana* (*N.*) *polita* (Sowerby, 1833). Distribution: 9°N-14°N and the Islas Galápagos, Ecuador (Bernard, 1983a). Subgenus changed from *Politoleda* (Allen & Hannah, 1986).

Genus *Jupiteria* Bellardi, 1875

Raised to genus (Maxwell, 1988).

- 31 *Jupiteria agapea* (Dall, 1908). Valve interior and hinge teeth figured. Distribution: off Gulf of California, Mexico, to Ecuador (Knudsen, 1970). Subgenus *Jupiteria* added. Distribution: 1°N-6°N (Bernard, 1983a).
- 36 *Jupiteria pontonia* (Dall, 1890). Extend distribution south to Peru (Abbott, 1974). Subgenus *Jupiteria* added (Bernard, 1983a).

Genus *Saccella* Woodring, 1925

As a genus by Woodring (1973), a synonym of *Jupiteria* Bellardi, 1875, by Allen & Hannah (1986), and a genus by Maxwell (1988).

- 19 *Saccella acrita* (Dall, 1908). Extend distribution south to Esmeraldas Province, Ecuador. Depth: 43 to 90 m (Cruz-P., 1977). Distribution: 1°N-31°N (Bernard, 1983a). Depth: 30 to 100 m (F. & L. Poorman, 1988).
- 20 *Saccella bicostata* (Sowerby, 1871). Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 21 *Saccella callimene* (Dall, 1908). Distribution: 10°N-37°N (Bernard, 1983a).
- 22 *Saccella eburnea* (Sowerby, 1833). Extend distribution north to Yavaros, Sonora, Mexico (García-Cubas & Reguero, 1987).
- 23 *Saccella elenensis* (Sowerby, 1833). Delete all synonyms except *Leda excavata* Hinds, 1843 (Cruz-P., 1977). Add synonyms: *Leda elenensis media* Hanley, 1860; *L. elenensis pyriformis* Hanley, 1860; *Leda elenensis gibbosa* Hanley, 1860, *non Nucula gibbosa* Fleming, 1828, *non* Sowerby, 1833, *non* McChesney, 1860. Include Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Depth: 35 to 90 m (F. & L. Poorman, 1988).
- 24 *Saccella fastigata* Keen, 1958. Cruz-P. (1977) used *N. gibbosa* Sowerby, 1833, with *N. fastigata* Keen, 1958, as a synonym. Bernard (1983) used *N. fastigata* with *N. gibbosa* as a synonym. Length: 43 mm (Draper, 1987).
- 25 *Saccella hindsii* (Hanley, 1860). Distribution: Alaska to Costa Rica. Depth: 27 to 1086 m (Abbott, 1974). Distribution: 8°N-28°N (Bernard, 1983a).
- 26 *Saccella impar* (Pilsbry & Lowe, 1932).
- 27 *Saccella ornata* (Orbigny, 1845). Depth: 47 and 90 m (Cruz-P., 1977).
- 28 *Saccella oxia* (Dall, 1916).

Genus *Adrana* H. & A. Adams, 1858

- 37 *Adrana crenifera* (Sowerby, 1833). Synonym: *Laeda arcata* Sowerby, 1871. Distribution: 14°S-17°N (Bernard, 1983a).
- 39 *Adrana exoptata* (Pilsbry & Lowe, 1932). Extend distribution south to Ecuador (Olsson, 1961). In the lower figure the concentric

sculpture should be shown more strongly as "crossing the lines of growth obliquely in the middle and posteriorly," as described by Pilsbry & Lowe (1932, p. 107) (Keen & Coan, 1975). Extend distribution north to San Felipe, Baja California, Mexico (Gemmell, Hertz & Myers, 1980). Distribution: 1°N-28°N (Bernard, 1983a).

- 40 *Adrana penascoensis* (Lowe, 1935). Extend distribution south to Laguna de Agiabampo, Sonora/Sinaloa, Mexico (García-Cubas & Reguero, 1987). Depth: 30 m (F. & L. Poorman, 1988).

Subfamily LEDELLINAE

Allen & Sanders, 1982

Genus *Ledella* Verrill & Bush, 1897

- *Ledella ultima* (Smith, 1885). Anatomy and shell figured. Extend distribution to include the west coast of America from ca. 0° to 45°N (Filatova & Shileiko, 1984). Synonyms; *Ledella messanensis*, *auctt.*, non Jeffreys, 1870, ex Seguenza MS; *L. crassa* Knudsen, 1970; *L. bushae* Warén, 1978. Anatomy and shell figured (Allen & Hannah, 1989).

Genus *Ledellina* Filatova & Shileiko, 1984

- *Ledellina olivacea* Filatova & Shileiko, 1984. Anatomy and shell figured. Distribution: ca. 6°S-8°S. Depth: 5300-7400 m (Filatova & Shileiko, 1984).

Subfamily SPINULINAE

Allen & Sanders, 1982

Genus *Bathyspinula* Filatova, 1958

Subgenus *Acutispinula*

Filatova & Schileyko, 1984

New name for *Spinula* Dall, 1908, non Herrich-Schaeffer, 1856 (Filatova & Shileiko, 1984).

- 51 *Bathyspinula* (A.) *calcar* (Dall, 1908). Synonym: *Leda* (*Spinula*) *calcarella* Dall, 1908. Depth: 4063 to 6100 m (Knudsen, 1970). Delete. No Panamic Province records. Circum-Pacific, with one central Pacific site (Bertsch & Myers, 1980). Change genus and subgenus. Anatomy figured (Filatova & Shileiko, 1984). Delete *L. calcarella* as a synonym. It is a *Bathyspinula* (*Bathyspinula*) (Coan, pers. comm, 1991).

Family SAREPTIDAE A. Adams, 1860

Subfamily SAREPTINAE A. Adams, 1860

Genus *Sarepta* A. Adams, 1860

- 50 *Sarepta abyssicola* E. A. Smith, 1885. Delete. Distribution is outside of the Panamic Province. Occurs in the central and south Pacific (Bernard, 1983a).

Subfamily YOLDIINAE Habe, 1977

Genus *Megayoldia* Verrill & Bush, 1897

Raised from subgenus (Allen & Hannah, 1986).

- 58 *Megayoldia martyria* (Dall, 1897). Delete. Distribution (45°N-60°N) is not within the Panamic Province (Bernard, 1983a).

Genus *Orthoyoldia* Verrill & Bush, 1897

Raised from subgenus (Allen & Hannah, 1986).

- 59 *Orthoyoldia panamensis* (Dall, 1908). Synonym: *Yoldia* (O.) *quiba* Olsson, 1942 (Bernard, 1983a).

Subfamily YOLDIELLINAE Allen, 1978

Genus *Yoldiella* Verrill & Bush, 1897

Raised from subgenus (Bernard, 1983a; Allen & Hannah, 1986).

Subgenus *Yoldiella*, s. s.

- 60 *Yoldiella* (Y.) *cecinnella* (Dall, 1916). Genus as *Portlandia* Mörch, 1857 (Abbott, 1974), and as *Yoldiella* by Bernard (1983). Distribution: 24°N (Bernard, 1983a).
- 61 *Yoldiella* (Y.) *dicella* (Dall, 1908). Distribution: 17°N-45°N (Bernard, 1983a).
- 62 *Yoldiella* (Y.) *leonilda* (Dall, 1908). The fragmented type has not been figured (Knudsen, 1970).
- 63 *Yoldiella* (Y.) *mantana* (Dall, 1908).

Family TINDARIIDAE Verrill & Bush, 1897

Genus *Tindaria* Bellardi, 1875

Read: Ligament external; shell ovate, thick; beaks high (Keen & Coan, 1975).

- 52 *Tindaria atossa* Dall, 1908. Closely related to *Tindaria smirna* Dall, 1908 [56], and may be conspecific with it (Knudsen, 1970).
- 53 *Tindaria compressa* Dall, 1908. Length: 11.5 mm. Shell interior and hinge teeth figured.

- Distribution: 6°N-30°N (Knudsen, 1970).
- 54 *Tindaria mexicana* Dall, 1908. Distribution: San Diego, California, to Acapulco, Guerrero, Mexico (Abbott, 1974). Distribution: 17°N-48°N (Bernard, 1983a).
- 55 *Tindaria panamensis* Dall, 1908. Distribution: 7°N-28°N (Bernard, 1983a).
- 56 *Tindaria smirna* Dall, 1908. Closely related to *Tindaria atossa* Dall, 1908 [52], and may be conspecific with it (Knudsen, 1970).
- Family NEILONELLIDAE Allen, 1978  
Genus *Neilonella* Dall, 1881  
Synonym: *Saturnia* Seguenza, 1877, *non* Schrank, 1802 (Maxwell, 1988).
- 33 *Neilonella lobula* (Dall, 1908). Genus changed to *Saturnia* (Bernard, 1983a).
- 35 *Neilonella lucasana* (Strong & Hertlein, 1937). Genus changed to *Saturnia* (Bernard, 1983a). Extend distribution north to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).
- Family MALLETIIDAE H. & A. Adams, 1858  
Genus *Malletia* Moulins, 1832  
Synonym: *Katadesmia* Dall, 1908 (Allen & Hannah, 1986).  
Subgenus *Malletia*, s. s.
- *Malletia* (*M.*) *cuneata* Jeffreys, 1876. As subgenus *Neilo*. Synonyms: *Portlandia kolthoffi* Hägg, 1904; *Malletia pellucida* Thiele, 1912; *M. (Neilo) flora* Dall, 1916. Length: 10.4 mm. Shell, hinge teeth and anatomy figured. Distribution: Gulf of Panama; west Pacific; Atlantic Ocean; Indian Ocean; Antarctic Ocean. Depth: 2365 to 6156 m (Knudsen, 1970). Shell variation figured (Allen, 1978). *Portlandia kolthoffi* and *Malletia cuneata* considered as separate Atlantic species in the genus *Katadesmia* (Bouchet & Warén, 1979). *Malletia (Minormalletia) kolthoffi* is correct for the Pacific species, whereas *M. cuneata* (Jeffreys, 1876) is a distinct Atlantic species. Distribution: 6°N-72°N, 2200-3600 m (Bernard, 1983a). As subgenus *Malletia*. Shell and anatomy figured. A cosmopolitan species of the abyss, with synonyms as listed above by Knudsen (1970) (Sanders & Allen, 1985).
- 46 *Malletia* (*M.*) *truncata* Dall, 1908. Distribution: 3°N-55°N (Bernard, 1983a).
- 57 *Malletia* (*M.*) *vincula* (Dall, 1908). As genus *Katadesmia* (Bouchet & Warén, 1979).
- Genus *Minormalletia* Dall, 1908  
Raised from subgenus (Sanders & Allen, 1985).
- 47 *Minormalletia arciformis* (Dall, 1908).
- 48 *Minormalletia benthima* (Dall, 1908).
- Subclass AUTOBRANCHIA Grobben, 1894  
Follows Waller (1978).  
Superorder PRIONODONTA MacNeil, 1937  
Order ARCOIDA  
Superfamily ARCACEA  
Family ARCIDAE  
Subfamily ARCINAE  
Genus *Arca* Linnaeus, 1758
- 66 *Arca mutabilis* (Sowerby, 1833). Include L'île Clipperton (France) and the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).
- 67 *Arca pacifica* (Sowerby, 1833). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985).
- Genus *Barbatia* Gray, 1842  
Subgenus *Barbatia*, s. s.
- 69 *Barbatia* (*B.*) *lurida* (Sowerby, 1833). Length: 54.1 mm (Draper, 1987).
- Subgenus *Acar* Gray, 1857
- 70 *Barbatia* (*A.*) *bailyi* (Bartsch, 1931). Length: 9 mm. Distribution: Santa Monica, California, to Panama (McLean, 1978).
- *Barbatia* (*A.*) *divaricata* (Sowerby, 1833). Synonyms: *Arca hawaiiensis* Dall, Bartsch & Rehder, 1938; *Arca laysana* Dall, Bartsch & Rehder, 1938. Distribution: L'île Clipperton (France), and the Indo-Pacific (Bernard, 1983a).
- 71 *Barbatia* (*A.*) *gradata* (Broderip & Sowerby, 1829). Include Islas Galápagos, Ecuador, in distribution (Abbott, 1974). Similar to the Caribbean *B. (A.) domingensis* (Lamarck, 1819). Heath (1941) studied the anatomy (Keen & Coan, 1975). Length: 33 mm (Draper, 1987).
- 72 *Barbatia* (*A.*) *rostaе* Berry, 1954. Abbott (1974) made *B. rostaе* a synonym of *B. gradata* (Broderip & Sowerby, 1829). A valid species. Include Islas Galápagos, Ecuador, in

distribution (Bernard, 1983a). Holotype figured (Hertz, 1984).

Subgenus *Calloarca* Gray, 1857

- 73 *Barbatia* (C.) *alternata* (Sowerby, 1833). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Extend distribution across Gulf of California to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987). Length: 46.8 mm (Draper, 1987).

Subgenus *Cucullaearca* Conrad, 1865

- 74 *Barbatia* (C.) *reeveana* (Orbigny, 1846). Add synonym: *Barbatia* (C.) *bramkampii* Durham, 1950. Include L'île Clipperton (France) and the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 94.9 mm (Wagner & Abbott, 1990).

Genus *Fugleria* Reinhart, 1937  
Raised to genus (Bernard, 1983a).

- 75 *Fugleria* *illota* (Sowerby, 1833). Extend distribution to Punta Peñasco, Sonora, Mexico, and south to Peru and the Islas Galápagos, Ecuador. Depth: intertidal to 73 m (Hertlein & Grant, 1972). Extend distribution across the Gulf of California to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).

Subfamily ANADARINAE

Genus *Anadara* Gray, 1847

Subgenus *Anadara*, s. s.

- 77 *Anadara* (A.) *adamsi* Olsson, 1961. Extend distribution north to Bahía de los Angeles, Baja California, Mexico (F. & L. Poorman, 1978). Extend distribution south to Isla Gorgona, Colombia (von Prahl, 1986).
- 78 *Anadara* (A.) *concinna* (Sowerby, 1833). Changed to subgenus *Sectiarca* Olsson, 1961 (Abbott, 1974). As subgenus *Anadara* (Bernard, 1983a). Not all specimens have grooved ribs. Grooving is a variable characteristic (Gemmell, Myers & Hertz, 1987).
- 79 *Anadara* (A.) *mazatlanica* (Hertlein & Strong, 1943). Extend distribution south to Máncora,

Peru (Peña, 1971). Extend distribution north to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988). Length: 82.2 mm (Draper, 1987).

- 80 *Anadara* (A.) *obesa* (Sowerby, 1833). Length: 32.6 mm (Draper, 1987).
- 81 *Anadara* (A.) *similis* (C.B. Adams, 1852). Extend distribution south to Tumbes, Peru (Peña, 1971). Extend distribution north to the Gulf of Fonseca, El Salvador (Hernández, 1979).
- 82 *Anadara* (A.) *tuberculosa* (Sowerby, 1833). Synonyms: *Arca secticostata* Reeve, 1844; *A. valdiviana* Philippi, 1887 (Bernard, 1983a). Length: 92 mm (Draper, 1987).

Subgenus *Cunearca* Dall, 1898

- 83 *Anadara* (C.) *aequatorialis* (Orbigny, 1846). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 35 mm (Draper, 1987).
- 84 *Anadara* (C.) *bifrons* (Carpenter, 1857). Synonym: *Arca inaequalis* Sowerby, 1832, *non* Bruguière, 1790 (Bernard, 1983a). Length: 55.4 mm (Draper, 1987).
- 85 *Anadara* (C.) *esmeralda* (Pilsbry & Olsson, 1941). Extend distribution south to Tumbes, Peru (Peña, 1971). Length: 59.3 mm (Draper, 1987). Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 87 *Anadara* (C.) *perlabiata* (Grant & Gale, 1931). Length: 46.6 mm (Draper, 1987).
- 88 *Anadara* (C.) *reinharti* (Lowe, 1935). Extend distribution south to Tumbes, Peru (Peña, 1971). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). Subgenus changed from *Esmerarca* (Bernard, 1983a).

Subgenus *Larkinia* Reinhart, 1935

- 90 *Anadara* (L.) *multicostata* (Sowerby, 1833). Synonyms: *Arca brandtii* Philippi, 1845; *A. camuloensis* Osmont, 1904 (Bernard, 1983a). Length: 131 mm (Wagner & Abbott, 1990).

Subgenus *Potiarca* Iredale, 1939

- 86 *Anadara* (P.) *nux* (Sowerby, 1833). Extend distribution south to Tumbes, Peru (Peña, 1971). Genus changed from *Cunearca*.

*Anadara (P.) chemnitzii* (Philippi, 1851) is a similar species from the western Atlantic (Woodring, 1973). Synonyms: *Arca zorritensis* Spieker, 1922; *A. patheonensis* Spieker, 1922. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 23.9 mm (Draper, 1987).

Subgenus *Rasia* Gray, 1857

- *Anadara (R.) auricula* Bernard, 1983. Synonym: *Arca auriculata* Sowerby, 1833, *non* Lamarck, 1819. Ecuador only. Depth: 15 to 30 m (Bernard, 1983a).
- 91 *Anadara (R.) emarginata* (Sowerby, 1833). Depth: 51 m (Cruz-P., 1977).
- 92 *Anadara (R.) formosa* (Sowerby, 1833). Extend distribution into the Gulf of California at Bahía de los Angeles, Baja California, Mexico (F. & L. Poorman, 1978). Extend distribution to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

Subgenus *Scapharca* Gray, 1847

- 93 *Anadara (S.) biangulata* (Sowerby, 1833). Depth: 5 to 80 m. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).
- 96 *Anadara (S.) labiosa* (Sowerby, 1833). Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972).

Subgenus *Tosarca* Noda, 1965

- 95 *Anadara (T.) hyphalopilema* Campbell, 1962. Subgenus changed from *Scapharca* (Woodring, 1973). Length: 80 mm (Draper, 1987). Extend distribution south to Guayas, Ecuador (Skoglund, 1990b).

Genus *Bathyarca* Kobelt, 1891

- 97 *Bathyarca corpulenta* (Smith, 1885). *Arca orbiculata* Dall, 1881, with synonyms *Arca (Bathyarca) corpulenta* Smith, 1885; *Arca (Bathyarca) imitata* Smith, 1885; *Bathyarca abyssorum* Verrill & Bush, 1898; *Arca strebeli* Melvill & Standen, 1907; *Arca (Bathyarca) nucleator* Dall, 1908; *Arca corpulenta* var. *pompholyx* Dall, 1908. Height: 28.8 mm. Shell and anatomy figured. Distribution: California

(34°N) to Chile (34°S); west and central Pacific; Atlantic Ocean including Antarctic sector; Celebes Sea (Knudsen, 1970). Delete as synonyms: *Arca imitata* Smith, 1885; *Bathyarca abyssorum* Verrill & Bush, 1898; *Arca strebeli* Melvill & Standen, 1907. Synonym: *Bathyarca orbiculata* Dall, of Knudsen, 1970, *non* Dall, 1881. Anatomy figured. Distribution: Pacific Ocean only (Oliver & Allen, 1980).

Genus *Grandiarca* Olsson, 1961

Raised to genus (Moore, 1983).

- 89 *Grandiarca grandis* (Broderip & Sowerby, 1829). Add synonym: *Arca larkinii* Nelson, 1870 (Bernard, 1983a). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). Length: 129.5 mm (Draper, 1987).

Genus *Lunarca* Gray, 1842

- 98 *Lunarca brevifrons* (Sowerby, 1833). Depth to 90 m (Cruz-P., 1977). Length: 30.5 mm (Draper, 1987).

Subfamily STRIARCINAE

Genus *Arcopsis* von Koenen, 1885

- 99 *Arcopsis solida* Sowerby, 1833. Extend distribution south to Chimbote, Peru (Peña, 1971). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Length: 19.1 mm (Draper, 1987).

Family NOETIIDAE

Subfamily NOETIINAE

Genus *Noetia* Gray, 1857

Subgenus *Noetia*, s. s.

- 101 *Noetia (N.) reversa* (Sowerby, 1833). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 67 mm (Draper, 1987).

Subgenus *Sheldonella* Maury, 1917

- 103 *Noetia (S.) delgada* (Lowe, 1935). Length: 14.8 mm (Draper, 1987). Depth: 100 m (F. & L. Poorman, 1988).

## Superfamily LIMOPSACEA

## Family LIMOPSIDAE

Genus *Limopsis* Sassi, 1827

- 104 *Limopsis dalli* Lamy, 1912. Synonym: *Limopsis compressus* Dall, 1896, *non* Nevill, 1874. Length: 40 mm. Distribution: off Baja California, Mexico, to the Gulf of Panama. Depth: 2071-4200 m. Regarded as a subspecies of *L. pelagica* Smith, 1885, by Knudsen (1970). Cosmopolitan, but absent from the Arctic Ocean. Delete *Limopsis pelagica* as a synonym (Oliver, 1981). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). Distribution: 6°N-52°N (Bernard, 1983a).
- 106 *Limopsis juarezi* Dall, 1908. Distribution: 6°N (Bernard, 1983a).
- 109 *Limopsis zonalis* Dall, 1908. Cosmopolitan, but absent from the Arctic Ocean (Oliver, 1981).

## Superfamily GLYCYMERIDACEA

## Raised by Bernard (1983a).

## Family GLYCYMERIDIDAE

Genus *Glycymeris* Da Costa, 1778Subgenus *Glycymeris*, s. s.

- 110 *Glycymeris* (*G.*) *gigantea* (Reeve, 1843). Distribution: 25°N-31°N (Bernard, 1983a). Length: 110.2 mm (Draper, 1987). Depth: 60 m (F. & L. Poorman, 1988).
- 111 *Glycymeris* (*G.*) *lintea* Olsson, 1961. Add the Islas Galápagos, Ecuador, to distribution (Keen & Coan, 1975).
- 112 *Glycymeris* (*G.*) *maculata* (Broderip, 1832). Extend distribution south to Pimentel, Peru (Peña, 1971). Depth: 5 to 45 m (Bernard, 1983a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Length: 101 mm (Draper, 1987).
- *Glycymeris* (*G.*) *ovata* (Broderip, 1832). Synonym: *Pectunculus intermedius* Broderip, 1832. Distribution 5°S-12°S, intertidal zone (Bernard, 1983a).

Subgenus *Axinactis* Mörch 1861

- 113 *Glycymeris* (*A.*) *delessertii* (Reeve, 1843). Length: 52.7 mm (Draper, 1987).

Subgenus *Axinola* Hertlein & Grant, 1972

- *Glycymeris* (*A.*) *guadalupensis* Strong, 1938. Length: 10 mm. Distribution: Isla Guadalupe, west coast of Baja California, Mexico. Depth: 16 to 28 m (Strong, 1938). Distribution: 23°N-27°N (Bernard, 1983a).

Genus *Tucetona* Iredale, 1931

Raised from subgenus (Nicol & Jones, 1984).

Subgenus *Tucetona*, s. s.

- 115 *Tucetona* (*T.*) *canoa* (Pilsbry & Lowe, 1941).
- 117 *Tucetona* (*T.*) *strigilata* (Sowerby, 1833).

Subgenus *Bellaxinaea* Nicol & Jones, 1984

- 116 *Tucetona* (*B.*) *multicostata* (Sowerby, 1833). Add synonym: *Pectunculus parcipictus* Reeve, 1843. Extend distribution to the Islas Galápagos, Ecuador (Bernard, 1983a). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). New subgenus (Nicol & Jones, 1984). Length: 46 mm (Draper, 1987).

## Family PHILOBRYIDAE

Genus *Philobrya*

Cooper, 1867, *ex* Carpenter MS

Genus author changed from Carpenter, 1872 (Coan, 1986).

- 118 *Philobrya setosa* (Carpenter, 1894). Syntype figured (Tevesz, 1977).

## Superorder ISOFILIBRANCHIA Iredale, 1939

## Order MYTILOIDA

## Superfamily MYTILACEA

## Family MYTILIDAE

## Subfamily MYTILINAE

Genus *Mytilus* Linnaeus, 1758Subgenus *Mytilus*, s. s.

- *Mytilus* (*M.*) *californianus* Conrad, 1837. Distribution: Aleutian Islands, Alaska, to Isla Socorro, Mexico (Abbott, 1974). Distribution: 19°N-60°N. Depth: intertidal zone to 50 m (Bernard, 1983a). Length: 251 mm (Draper, 1987). Distribution: Alaska to Puerto

Rompiente, Baja California Sur: Isla Socorro, Mexico (Coan, pers. comm., 1991).

- *Mytilus* (*M.*) *edulis* Linnaeus, 1758. Synonyms: *Mytilus trossulus* Gould, 1850; *M. glomeratus* Gould, 1851; *M. pedroanus* Conrad, 1855; *M. edulis latissimus* Carpenter, 1857; *M. edulis normalis* Carpenter, 1857; *M. septentrionalis* Küster & Clessin, 1889; *M. edulis diegensis* Coe, 1945; *M. edulis kussakini* Scarlato & Starobogatov, 1979. Distribution: 23°N-71°N; cosmopolitan in temperate and cold seas. Depth: intertidal zone to 5 m (Bernard, 1983a). Length: 133.2 mm (Draper, 1987). Delete. Does not occur on the Pacific coast of North America (McDonald & Koehn, 1988).
- *Mytilus galloprovincialis* Lamarck, 1819. Synonyms: *Mytilus edulis diegensis* Coe, 1945; *Mytilus edulis* of Soot-Ryen, 1955 non Linnaeus, 1758 (in part). A genetically distinct, introduced species. Distribution: Southern California to Cabo San Lucas, Baja California Sur, Mexico; Mediterranean Sea; Japan; Hong Kong; South Africa; Atlantic coast of Europe north of the British Isles. In bays, estuaries, and exposed coasts, attached to hard substrates from mid-tide level to several meters subtidally (McDonald & Koehn, 1988).

Genus *Brachidontes* Swainson, 1840

- 119 *Brachidontes adamsianus* (Dunker, 1857). As genus *Aeidimytilus* Olsson, 1961 (Hertlein & Grant, 1972). Hinge figured (Gemmell, Myers & Hertz, 1987).
- *Brachidontes purpuratus* (Lamarck, 1819). Synonyms: *Mytilus ovalis* Lamarck, 1819; ?*M. exaratus* Philippi, 1847; *M. exilis* Philippi, 1847; *M. bifurcatus* Dautzenberg, 1896, non Conrad, 1837. Distribution: 1°S-41°S, including the Islas Galápagos, Ecuador. Intertidal zone (Bernard, 1983a). Delete. Galápagos record probably in error (Coan, pers. comm., 1990).
- 122 *Brachidontes semilaevis* (Menke, 1849). Extend distribution south to Chimbote, Peru (as *B. multiformis*) (Peña, 1971). Delete *Brachidontes multiformis* Carpenter, 1857, as a synonym; valid species (Abbott, 1974). *B. multiformis* as a synonym (Bernard, 1983a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Hinge figured (Gemmell, Myers & Hertz, 1987).

Genus *Choromytilus* Soot-Ryen, 1952

- 123 *Choromytilus palliopunctatus* (Carpenter, 1857). Synonym: *Mytilus tenuiaratus* Carpenter, 1857, ex Dunker MS, nom. nud. (Bernard, 1983a). Length: 192.5 mm (Draper, 1987).

Genus *Mytella* Soot-Ryen, 1955

- 125 *Mytella guyanensis* (Lamarck, 1819). Add synonyms: *Mytilus bicolor* Lamarck, 1819; *Modiola semifusca* Sowerby, 1825; *M. brasiliensis mutabilis* Carpenter, 1857 (Bernard, 1983a). Length: 75.1 mm (Draper, 1987).
- 126 *Mytella speciosa* (Reeve, 1857). Synonyms: *Modiolus planata* Tomlin, 1928, ex Carpenter MS; *M. (M.) tumbezensis* Pilsbry & Olsson, 1935 [128] (Bernard, 1983a).
- 127 *Mytella strigata* (Hanley, 1843). Add synonym: *Mytilus sinuatus* Reeve, 1857 (Bernard, 1983a).
- 128 *Mytella tumbezensis* (Pilsbry & Olsson, 1935). Bernard (1983a) made this a synonym of *M. speciosa* (Reeve, 1857) [126], but later decided it was a good species (Coan, pers. comm., 1990).

Genus *Septifer* Récluz, 1848

- *Septifer bifurcatus* (Conrad, 1837). Length: 32 mm. Distribution: Crescent City, California, to Cabo San Lucas, Baja California Sur, Mexico (McLean, 1978). Synonym: *Septifer bifurcatus obsoletus* Dall, 1916, nom. nud. Depth: intertidal zone to 50 m (Bernard, 1983a).
- 129 *Septifer zeteki* Hertlein & Strong, 1946. Add synonym: *Mytilus cumingianus* Reeve, 1858. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Extend distribution to Bahía San Carlos area, Sonora, Mexico (F. & L. Poorman, 1988).

Subfamily CRENELLINAE

Genus *Crenella* Brown, 1927

- 131 *Crenella divaricata* (Orbigny, 1847). As *Crenella inflata* Carpenter, 1864, with synonym: *Nuculocardia divaricata* Orbigny, auctt., non Orbigny, 1842. Distribution: Huntington Beach, California, to the Gulf of California, Mexico, and south to Callao, Peru. Depth: 4 to 91 m (Hertlein & Grant, 1972). Synonym:

*Crenella inflata* Carpenter, 1864, *non Mytilus inflatus* Müller, 1847. Include Isla del Coco, Costa Rica, in distribution (Bernard, 1983a).

Genus *Gregariella* Monterosato, 1884

- 132 *Gregariella chenui* (Récluz, 1842). Synonyms: *Mytilis chenuanus* Orbigny, 1846; *Mytilis fontaineus* Orbigny, 1846 (Hertlein & Grant, 1972). Extend distribution to near the head of the Gulf of California at San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).
- 133 *Gregariella coralliophaga* (Gmelin, 1791). A widespread and variable species that has many synonyms. Distribution: Monterey, California, to Peru; North Carolina to Texas; West Indies; Bermuda; Brazil (Abbott, 1974). Synonym: *Crenella coarctata* (Carpenter, 1857) (Bernard, 1983a). Occurrence in the Islas Galápagos doubtful (Finet, 1985). Extend distribution to Bahía San Carlos area, Sonora, Mexico (F. & L. Poorman, 1988).
- 134 *Gregariella denticulata* Dall, 1871. Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 35 m (F. & L. Poorman, 1988).

Genus *Lioberus* Dall, 1898

- 135 *Lioberus salvadoricus* (Hertlein & Strong, 1946). Depth: 40 m (F. & L. Poorman, 1988). Length: 47.6 mm (Wagner & Abbott, 1989).
- 136 *Lioberus splendidus* (Dunker, 1857). Delete. Probably a west Atlantic species (Bernard, 1983a).

Genus *Megacrenella* Habe & Ito, 1965

- 137 *Megacrenella columbiana* (Dall, 1897). Genus changed to *Rhomboidella*. *Crenella megas* Dall, 1902, not listed as a synonym. Distribution: Aleutian Islands, Alaska, to Mexico (Abbott, 1974). As genus *Megacrenella*. Synonym: *Crenella tamurai* Habe, 1955. Distribution: 17°N-60°N (Bernard, 1983a).

Subfamily LITHOPHAGINAE

Genus *Lithophaga* Röding, 1798

Subgenus *Diberus* Dall, 1898

--- *Lithophaga* (D.) *canalifera* (Hanley, 1843). Distribution: 1°S-4°N, intertidal zone (Bernard, 1983a). Lectotype designated. Length: 39.5 mm (Kleemann, 1983).

- 138 *Lithophaga* (D.) *plumula* (Hanley, 1844). Add synonyms: *Lithodomus subula* Reeve, 1857; *L. plumula kelseyi* Hertlein & Strong, 1946 (Keen & Coan, 1975). Lectotype designated. Add synonyms: *Lithophaga plumula* var. *gracilior* Carpenter, 1857; *L. plumula* var. *tumidior* Carpenter, 1857; ?(*Diberus*) *mucronata* (Philippi, 1846) (Kleemann, 1983). Distribution: 4°S-40°N, including L'île Clipperton (France) and the Islas Galápagos, Ecuador (Bernard, 1983a). Holotype of synonym, *Lithophaga* (D.) *divaricalis* Iredale, 1939, figured. Include the Philippines and Australian distribution (Kleemann, 1984). Occurrence in the Islas Galápagos doubtful (Finet, 1985). Length: 72.5 mm (Draper, 1987).

Subgenus *Labis* Dall, 1916

- 139 *Lithophaga* (L.) *attenuata* (Deshayes, 1836). Bernard (1983a) incorrectly uses as a synonym of *Labis peruviana* (Orbigny, 1846), which is found south of the Panamic Province (12°S-18°S). Valid species. Synonym: *Lithophaga* (L.) *attenuata rogersi* Berry, 1957 [140] (Kleemann, 1983). Holotype of *L. (L.) attenuata rogersi* figured (Hertz, 1984). Length: 110.6 mm (Draper, 1987).
- 140 *Lithophaga* (L.) *attenuata rogersi* Berry, 1957. Delete. Becomes a synonym of *Lithophaga* (L.) *attenuata* (Deshayes, 1836) [139] (Kleemann, 1983).

Subgenus *Myoforceps* Fischer, 1886

- 143 *Lithophaga* (M.) *aristata* (Dillwyn, 1817). Add synonyms: *Lithophaga calyculata* (Carpenter, 1857) [145]; *L. forficata* (Ravenel, 1861); *L. ropan* Deshayes, 1836; *L. bipenniferus* (Guppy, 1877) (Abbott, 1974). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). Synonyms: *L. aristata* var. *gracilior* Carpenter, 1857; *L. aristata* var. *tumidior* Carpenter, 1857. *Lithophaga incurva* Gabb, 1861, used as a synonym by Bernard (1983a), is a fossil *Botula*

(Kleemann, 1983). Length: 32.8 mm (Draper, 1987).

Subgenus *Stumpiella* Soot-Ryen, 1955

- 145 *Lithophaga* (S.) *calyculata* (Carpenter, 1857). Regarded as a synonym of *Myoforceps aristata* (Dillwyn, 1817) [143] by Abbott (1974). Valid species. Include L'île Clipperton (France) in distribution (Bernard, 1983a). Occurrence in the Islas Galápagos doubtful (Finet, 1985). Length: 23.1 mm (Draper, 1987).

Genus *Adula* H. & A. Adams, 1857

- 147 *Adula soleniformis* (Orbigny, 1846). Synonym: *Adula soleniformis panamensis* Olsson, 1961 [148]. Distribution: 5°S-8°N (Bernard, 1983a).  
 148 *Adula soleniformis panamensis* Olsson, 1961. Delete. Becomes a synonym of *A. soleniformis* (Orbigny, 1846) [147] (Bernard, 1983a).

Genus *Botula* Mörch, 1853

Moved from subfamily Modiolinae (Wilson & Tait, 1984).

- 155 *Botula fusca* (Gmelin, 1791). Synonym: *Botula cylista* Berry, 1959. Distribution 1°S-23°N, including the Atlantic (Bernard, 1983a). Holotype of *B. cylista* figured (Hertz, 1984). Add synonyms: *Modiola cinnamomea* Lamarck, 1819; *Modiola silicula* Lamarck, 1819; *Modiolo favanni* Potiez & Michaud, 1844; *Lithodomus projectans* Tate, 1892; *Botula hawaiiensis* Dall, Bartsch & Rehder, 1938; *Botula laysana* Dall, Bartsch & Rehder, 1938; *Botulopa silicula infra* Iredale, 1939. Anatomy and holotypes of several of the synonyms figured. Length: 29 mm. The single species in the genus is widespread in tropical and subtropical Indian, Pacific and western Atlantic oceans. Bores in dead corals, coral rocks and other calcareous rocks. Depth: intertidal zone to 532 m (Wilson & Tait, 1984).

Genus *Leiosolenus* Carpenter, 1856

Raised to genus (Wilson & Tait, 1984).

- 141 *Leiosolenus laevigata* (Quoy & Gaimard, 1835). Synonym: *Lithophaga hancocki* Soot-Ryen, 1955. Found only in living coral. Distribution: Islas Galápagos; Indonesia; Australia; Maldive

Islands; Red Sea (Kleemann, 1980). Include L'île Clipperton (France), in distribution (Bernard, 1983a). Occurrence in the Islas Galápagos doubtful (Finet, 1985).

- 142 *Leiosoleus spatiosa* (Carpenter, 1857). Length: 65 mm (Draper, 1987).

Subfamily MODIOLINAE

Genus *Modiolus* Lamarck, 1799

Subgenus *Modiolus*, s.s.

- 151 *Modiolus* (M.) *americanus* (Leach, 1815). Synonyms: *Modiolus tulipa* Lamarck, 1819; *M. pseudotulipa* Olsson, 1961. Distribution: Gulf of California, Mexico, to Peru; South Carolina to Brazil; Bermuda (Abbott, 1974). Depth: intertidal zone to 20 m (Bernard, 1983a).  
 149 *Modiolus* (M.) *capax* (Conrad, 1937). Add synonym: *Mytilus splendens* Dunker, 1857. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 188 mm (Draper, 1987).  
 --- *Modiolus* (M.) *neglectus* Soot-Ryen, 1955. Distribution: 23°N-37°N. Depth: 15 to 110 m (Bernard, 1983a).  
 152 *Modiolus* (M.) *rectus* (Conrad, 1837). Distribution: Vancouver Island, British Columbia, Canada, to the Gulf of California, Mexico (McLean, 1978). Extend distribution north to Bahía San Luis Gonzaga, Baja California, Mexico (Mulliner, 1984). Synonym: *Modiolus pacificus* Olsson, 1961. Distribution 5°S-35°N, including the Islas Galápagos, Ecuador (Bernard, 1983a). Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985). Length: 213 mm (Draper, 1987).

Genus *Amygdalum* Megerle von Mühlfeld, 1811

- 154 *Amygdalum pallidulum* (Dall, 1916). Distribution: 28°N-37°N (Bernard, 1983a). Length: 22.6 mm (Draper, 1987).

Genus *Benthomodiolus* Dell, 1987

- *Benthomodiolus abyssicola* (Knudsen, 1970). Length: 17.2 mm. Anatomy figured. Distribution: Gulf of Panama. Depth: 3270-3670 m (Knudsen, 1970). Holotype figured (Kenk & Wilson, 1985). Genus changed from *Modiolus*. Foot muscle mass figured (Dell, 1987).

Genus *Dacrydium* Torell, 1859

Subgenus *Dacrydium*, s. s.

- *Dacrydium* (*D.*) *panamensis* Knudsen, 1970. Length: 5 mm. Distribution: Acapulco, Guerrero, Mexico, to the Gulf of Panama. Depth: 3270 to 3670 m (Knudsen, 1970).

Subgenus *Quendreda* Iredale, 1936

- *Dacrydium* (*Q.*) *elegantulum* Soot-Ryen, 1955. Length: 2.4 mm. Redondo Beach, California, to the Islas Galápagos, Ecuador, in 25 to 200 m (Soot-Ryen, 1955). Distribution: 28°N-34°N (Bernard, 1983a). Finet (1985) states that occurrence in the Islas Galápagos is doubtful, but the type locality is Bahía de Gardner, Islas Galápagos.

Subfamily BATHYMODIOLINAE

Kenk & Wilson, 1985

Genus *Bathymodiolus* Kenk & Wilson, 1985

- *Bathymodiolus thermophilus* Kenk & Wilson, 1985. Length: 149.5 mm. Galápagos Rift thermal vents. Depth: 2495 m (Kenk & Wilson, 1985).

Superorder PTERIOMORPHIA Beurlen, 1944

Order PTERIOIDA Newell, 1965

Suborder PINNINA Waller, 1978

Superfamily PINNACEA

Family PINNIDAE

Genus *Pinna* Linnaeus, 1758

- 156 *Pinna rugosa* Sowerby, 1835. Add L'île Clipperton, (France), and south to Salinas, Ecuador, to distribution (Salvat & Salvat, 1972). Add Islas Galápagos, Ecuador, to distribution (Finet, 1987). Extend distribution north to near the head of the Gulf of California at San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).

Genus *Atrina* Gray, 1842

- 157 *Atrina maura* (Sowerby, 1835). Add synonym: ?*Pinna cumingii* Hanley, 1858 (Keen & Coan, 1975). Length: 422 mm (Draper, 1987).  
158 *Atrina oldroydii* Dall, 1901. Length: 231 mm (Draper, 1987).

- 160 *Atrina tuberculosa* (Sowerby, 1835). Considered a synonym of *Atrina maura* (Sowerby, 1835) by some authors, notably Winckworth and Fischer-Piette (Keen & Coan, 1975). Bernard (1983a) treats *A. tuberculosa* as a valid species with a distribution from 5°S to 28°N, including the Islas Galápagos, Ecuador.

Genus *Streptopinna* von Martens, 1880

- *Streptopinna saccata* (Linnaeus, 1758). Synonym: *Pinna nuttalli* Conrad, 1837. Height: 235 m. Distribution: throughout the Indo-West Pacific. Depth: 1-2 m (Kay, 1979). Extend distribution to Isla del Coco, Costa Rica. Also found from East Africa to eastern Polynesia (Shasky, 1987).

Suborder PTERIINA Newell, 1965

Superfamily PTERIACEA

Family PTERIIDAE

Genus *Pteria* Scopoli, 1777

- 161 *Pteria sterna* (Gould, 1851). Depth to 90 m (Cruz-P., 1977). Add synonyms: *Avicula eximia* Reeve, 1857; *A. libella* Reeve, 1857; *Pteria rositae* Hertlein, 1928. Delete *Pteria viridizona* Dall, 1916, as a synonym. Distribution: 5°S-30°N (Bernard, 1983a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Length: 152 mm (Wagner & Abbott, 1990).

Genus *Pinctada* Röding, 1798

- 162 *Pinctada mazatlanica* (Hanley, 1856). Add L'île Clipperton, (France), and the Islas Galápagos, Ecuador, to distribution (Bernard, 1983a). Length: 180 mm (Draper, 1987).

Family ISOGNOMONIDAE

Genus *Isognomon*

Lightfoot, 1786, ex Solander MS

Subgenus *Melina* Retzius, 1788

The subgenus *Isognomon*, s. s., is malleiform and occurs only in the Indo-Pacific. There has been confusion about the type species of *Isognomon* (Coan, pers. comm., 1990).

- 163 *Isognomon* (*M.*) *janus* Carpenter, 1857. Hinge and exterior of valve figured. Extend

distribution north to San Diego, California (Myers & D'Attilio, 1979). Length: 63.8 mm (Draper, 1987).

- *Isognomon (M.) incisus* (Conrad, 1837). Extend distribution to Isla del Coco, Costa Rica (Shasky, 1986a). Figured (Shasky, 1986b).
- 164 *Isognomon (M.) recognitus* (Mabille, 1895). Reported from Isla del Coco, Costa Rica, as *Isognomon "quadrangularis"* by Emerson (1978). As *I. quadratus* (Anton, 1837). Distribution: 2°S-26°N, including the Islas Galápagos, Ecuador (Bernard, 1983a). Synonym: *Isognomon quadratus* (Anton, 1837), *non* Sowerby, 1835 (Coan, pers. comm., 1991).

#### Family MALLEIDAE

Genus *Malleus* Lamarck, 1799

Subgenus *Malvufundus* Gregorio, 1885

- 165 *Malleus (M.) regulus* (Forskål, 1775). Synonyms: *Malleus rufipunctatus* Reeve, 1858; *Vulsella nuttalli* Conrad, 1837; *Avicula candeana* Orbigny, 1846; *Malleus tigrinus* Reeve, 1858; *M. panamensis* Mörch, 1861; *M. obvolutus* Folin, 1867. Cosmopolitan in warm water 9°N-23°N (Bernard, 1983a). Include Isla del Coco, Costa Rica, in distribution (Shasky, 1986a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Figured (Shasky, 1986b).

Order OSTREOIDA Férussac, 1822

Suborder OSTREINA Férussac, 1822

Superfamily OSTREACEA

Classification follows Harry (1985). Complete synonymies for species were not given by Harry. Morphological and anatomical keys to the oysters of Mexico (Castillo Rodríguez & García-Cubas, 1987).

Family GRYPHAEIDAE Vyalov, 1936

Subfamily PYCNODONTEINAE

Stenzel, 1959

Tribe HYOTISSINI Harry, 1985

Genus *Hyotissa* Stenzel, 1971

- 171 *Hyotissa hyotis* Linnaeus, 1758. Synonym: *Ostrea fisheri* (Dall, 1914) and numerous junior synonyms in the west Indo-Pacific populations. Distribution: Panamic Province; west Pacific (Harry, 1985). Distribution: Gulf of California,

Mexico, to Ecuador and the Islas Galápagos; east Africa and Madagascar to southern Japan (Moore, 1987). Length: 211.6 mm (Wagner & Abbott, 1988).

Genus *Parahyotissa* Harry, 1985

Subgenus *Pliohyotissa* Harry, 1985

- *Parahyotissa (P.) quercinus* (Sowerby, 1871). Figured (Harry 1985). Original description and figures from Sowerby, good photos. Distribution: San Felipe, Baja California, south on the west side of the Gulf of California to Cabo San Lucas, Baja California Sur; Puerto Vallarta, Jalisco; Manzanillo, Colima, on the mainland of Mexico (Gemmell, Hertz & Myers, 1985).

#### Family OSTREIDAE

Subfamily LOPHINAE Vyalov, 1936

Tribe LOPHINI Vyalov, 1936 (Harry, 1985)

Genus *Dendostrea* Swainson, 1835

- *Dendostrea folium* (Linnaeus, 1758). Synonyms: *Mytilus frons* Linnaeus, 1758; *M. cristagalli* Linnaeus, 1758; *Ostra serra* Dall, 1914, *non* Lamarck, 1899; *O. dalli* Lamy, 1930; *O. (Pretostrea) bresia* Iredale, 1939. Circumtropic, including Bahía de Panama (Bernard 1983a). Extend distribution to Isla del Coco, Costa Rica, and Cabo Pulmo, Baja California Sur, Mexico. Figured (Shasky, 1986b).
- *Dendostrea mexicanum* (Sowerby, 1871). Distribution: coast of Baja California, Mexico. Found in shallow subtidal zones, on gorgonians, and stony corals (Harry, 1985).

Tribe MYRAKEENINI Harry, 1985

Genus *Myrakeena* Harry, 1985

- 167 *Myrakeena angelica* (Rochebrune, 1895). Extend distribution south to Pimentel, Peru (Peña, 1971). Figured. Distribution limited to the Gulf of California, Mexico. Low tide zone and slightly deeper (Harry, 1985). Extend distribution north to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).

Subfamily **OSTREINAE** Rafinesque, 1815

Tribe **OSTREINI** Rafinesque, 1815  
(Harry, 1985)

Genus *Ostrea* Linnaeus, 1758

- 175 *Ostrea tubulifera* Dall, 1914. Delete. Probably not a valid Panamic species; type may be from another province (Bernard, 1983a).

Genus *Ostreola* Monterosato, 1884

- 169 *Ostreola conchaphila* (Carpenter, 1857). As *Ostrea lurida* Carpenter, 1864. Synonyms: *Ostrea lurida laticaudata* Carpenter, 1864, ex Nuttall MS; *O. l. rufoides* Carpenter, 1864; *O. l. expansa* Carpenter, 1864, non Sowerby, 1819 (Bernard, 1983a). Synonym: *Ostrea lurida* Carpenter, 1864. Distribution: Alaska to Panama. Shallow subtidal zone to a few meters depth (Harry, 1985). Depth: 100 m (F. & L. Poorman, 1988).

Tribe **UNDULOSTREINI** Harry, 1985

Genus *Undulostrea* Harry, 1985

- 173 *Undulostrea megodon* (Hanley, 1846). Add synonyms: *Ostrea gallus* Valenciennes, 1846; *O. cerrosensis* Gabb, 1866 (Keen & Coan, 1975). Distribution: Laguna San Ignacio, west coast of Baja California Sur, Mexico; Gulf of California to Peru. Low intertidal to several meters depth: attached to shells (Harry, 1985). Length: 100.6 mm (Draper, 1987).

Tribe **STRIOSTREINI** Harry, 1985

Genus *Saccostrea* Dolfuss & Dautzenberg, 1920

- 174 *Saccostrea palmula* (Carpenter, 1857). Include Isla Cocos, Costa Rica, in distribution (Bakus, 1975). Distribution: Laguna San Ignacio, west coast of Baja California Sur, Mexico, to Panama and the Islas Galápagos, Ecuador. Intertidal, attached to mangroves or rocks (Harry, 1985). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983).

Genus *Striostrea* Vyalov, 1936

Subgenus *Striostrea*, s. s.

- 172 *Striostrea* (S.) *prismatica* (Gray, 1825).  
Synonym: *Ostrea puelchana* Orbigny, auct., non

Orbigny, 1841; *O. iridescens* Hanley, 1854; *Ostrea virginica californica* Marcou, 1858 (Bernard, 1983a). Subtidal zone, attached to non-calcareous rock (Harry, 1985). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983).

Tribe **CRASSOSTREINI**

Torigoe, 1981 (Harry, 1985)

Genus *Crassostrea* Sacco, 1897

- 168 *Crassostrea columbiensis* (Hanley, 1846).  
Synonym: *Ostrea tulipa* Sowerby, 1871 (Bernard, 1983a). Synonym: *Ostrea corteziensis* Hertlein, 1951 [170]. Distribution: Gulf of California to Ecuador (Harry, 1985).
- 170 *Crassostrea corteziensis* (Hertlein, 1951).  
Delete. Becomes synonym of *Crassostrea columbiensis* (Hanley, 1846) [168] (Harry, 1985).

Superfamily **DIMYACEA** P. Fischer, 1886

Family **DIMYIDAE**

Genus *Dimya* Rouault, 1850

- 205 *Dimya californiana* Berry, 1936. Redescription.  
Hinge figured (Myers & D'Attilio, 1980).

Superfamily **PLICATULACEA** Watson, 1930

Family **PLICATULIDAE**

Genus *Plicatula* Lamarck, 1801

- 206 *Plicatula anomioides* Keen, 1958. Extend distribution south to La Libertad, El Salvador (Hernández, 1979).
- 207 *Plicatula inezana* Durham, 1950. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Extend distribution north to Bahía de los Angeles, Baja California, Mexico (F. & L. Poorman, 1978). Depth: 45 to 140 m (Bernard, 1983a). Length: 52.1 mm (Draper, 1987). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988). Extend distribution south to Bahía Cocos, Costa Rica (Skoglund, 1990a).
- 208 *Plicatula penicillata* Carpenter, 1857. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Intertidal zone. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).

Extend distribution north to Bahía de los Angeles, Baja California, Mexico (F. & L. Poorman, 1978). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 20 to 80 m (F. & L. Poorman, 1988).

- 209 *Plicatula spondyloopsis* Rochebrune, 1895. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).

Suborder PECTINNA Waller, 1978

Superfamily PECTINACEA

Family PECTINIDAE

Genus *Argopecten* Monterosato, 1889

As a subgenus of *Chlamys* (Hertlein & Grant, 1972). As a genus (Abbott, 1974; Bernard, 1983a).

- 182 *Argopecten circularis* (Sowerby, 1835). Add synonyms: *Pecten pomatia* Valenciennes, 1846; *P. ventricosus aequisulcatus* Carpenter, 1864; *P. (Plagiectenium) subventricosus* Dall, 1898; *P. compactus* Dall, 1898; *P. newsomi* Arnold, 1903. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 106 mm (Wagner & Abbott, 1990).

Genus *Chlamys* Röding, 1798

Subgenus *Chlamys*, s. s.

- *Chlamys* (*C.*) *incantata* Hertlein, 1972. Height: 45 mm. Islas Galápagos, Ecuador. Depth: 200 m (Hertlein, 1972).
- 183 *Chlamys* (*C.*) *lowei* (Hertlein, 1935). Height: 22.9 mm (Draper, 1987).

Genus *Crassadoma* Bernard, 1986

- *Crassadoma gigantea* (Gray, 1825). Synonyms: *Hinnita poulsoni* Conrad, 1834; *Pecten* (*Chlamys*) *multirugosus* Gale, 1928. Distribution: Aleutian Islands to Bahía Magdalena, Baja California Sur, Mexico. Depth: high tide zone to 55 m (Hertlein & Grant, 1972). As *Hinnites multirugosus* (Gale, 1928) with *H. giganteus* Gray, 1825, as a synonym (Abbott, 1974). *Pecten* (*Chlamys*) *multirugosus* Gale, 1928, is a junior synonym of *Hinnites giganteus* (Gray, 1825) (Roth & Coan, 1978). Synonyms: *H. crassa* Conrad, 1857; *P. (C.) multirugosus crassiplicatus* Gale, 1928;

*Hinnites benedicti* Adegoke, 1969. Distribution: 25°N-60°N. Depth: intertidal zone to 80 m (Bernard, 1983a). Genus changed from *Hinnites* by Bernard (1986). Length: 233 mm (Wagner & Abbott, 1990).

Genus *Cyclopecten* Verrill, 1897

Subgenus *Cyclopecten*, s. l.

- *Cyclopecten bistriatus* (Dall, 1916). Distribution: 23°N-46°N. Depth: 1100 to 1160 m (Bernard, 1983a).
- 187 *Cyclopecten exquisitus* Grau, 1959. Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983).
- *Cyclopecten graui* Knudsen, 1970. Length: 18 mm. Known only from Bahía de Panama. Depth: 3270 to 3670 m (Knudsen, 1970).
- 188 *Cyclopecten incongruus* (Dall, 1916). Delete. Known only from the holotype from Isla Cedros (29°N), which is north of the Panamic Province (Bernard, 1983a).
- 190 *Cyclopecten pernومus* (Hertlein, 1935). Include the Islas Galápagos, Ecuador, in distribution (Grau, 1959). Depth: 2 to 1720 m (Hertlein & Grant, 1972).
- 191 *Cyclopecten polyleptus* (Dall, 1908). Genus changed from *Delectopecten*. Distribution: 0-52°S. Depth: 550 to 650 m (Bernard, 1983a). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth to 35 m (F. & L. Poorman, 1988).

Genus *Delectopecten* Stewart, 1930

- 191 *Delectopecten polyleptus* (Dall, 1908). Delete here. Genus changed. See *Cyclopecten*.
- 192 *Delectopecten randolphi* (Dall, 1897). Synonyms: *Pecten whiteavesi* Orcutt, 1915, *nom. nud.*; *P. (Pseudamussium) randolphi tillamookensis* Arnold, 1906; *P. (Pseudamussium) arces* Dall, 1913 (Bernard, 1983a).
- 193 *Delectopecten vitreus* (Gmelin, 1791). As *Cyclopecten*. Delete. Distribution (10°S-52°S) is not within the Panamic Province (Bernard, 1983a).

Genus *Flabellipecten* Sacco, 1897

Raised from subgenus (Woodring, 1982; Moore, 1984).

176 *Flabellipecten berryi* (Bernard, 1983). Primary homonym of *Pecten berryi* Stephenson, 1923 (Coan, pers. comm., 1991). Synonym: *Pecten lunaris* Berry, 1963, *non* Römer, 1839. Preoccupied (Bernard 1983a). Holotype of *P. lunaris* figured (Hertz, 1984). Extend distribution south to Nicaragua (Montoya, López & López, 1987). Depth: 100 m (F. & L. Poorman, 1988).

--- *Flabellipecten diegensis* (Dall, 1898). Diameter: 100 mm. Depth: 30 m. Distribution: Bodega Bay, California, to Cabo San Lucas, Baja California Sur, Mexico (McLean, 1978). Distribution: 23°N-38°N. Depth: 10 to 375 m (Bernard, 1983a).

177 *Flabellipecten sericeus* Hinds, 1845. Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). Length: 108 mm (Draper, 1987). Depth: 183 m (Skoglund, 1988).

Genus *Hyalopecten* Verrill, 1897

Raised from subgenus (Bernard, 1983a).

--- *Hyalopecten neoceanicus* (Dall, 1908). Height: 12 mm. Holotype figured. Islas Galápagos, Ecuador (Grau, 1959). Distribution: Bahía de Panama to the Islas Galápagos, Ecuador. Depth: 3270 to 3670 m (Knudsen, 1970). Genus changed from *Pecten* (*Pseudamussium*) (Bernard, 1983a).

Genus *Leptopecten* Verrill, 1897

Subgenus *Leptopecten*, s. s.

195 *Leptopecten* (L.) *biolleyi* (Hertlein & Strong, 1946). Regarded as a subspecies of *Leptopecten velero* (Hertlein, 1935) [199] (Cruz-P., 1977) and as a full species (Bernard, 1983a).

196 *Leptopecten* (L.) *camerella* (Berry, 1968). Holotype figured (Hertz, 1984).

197 *Leptopecten* (L.) *euterpes* (Berry, 1957). Holotype figured (Hertz, 1984).

--- *Leptopecten* (L.) *latiaurata* (Conrad, 1837). Range: Point Reyes, California, to Cabo San Lucas, Baja California Sur, Mexico. Depth: subtidal to 229 m (Hertlein & Grant, 1972). Genus changed from *Chlamys*. Synonyms: *Pecten latiauritus*, *nom. van.*, *auctt.*; *P. monotimeris* Conrad, 1837; *P. tunica* Philippi, 1844; *P. latiauritus fucicolus* Dall, 1898; *P. (Chlamys) latiauritus fragilis* Arnold, 1903, *non*

*P. fragilis* DeFrance, 1825; *P. (Chlamys) latiauritus bellilamellatus* Arnold, 1903; *P. (Chlamys) latiauritus cerritensis* Arnold, 1906; *P. (Chlamys) latiauritus delosi* Arnold, 1906. Range 23°N-38°N (Bernard, 1983a).

198 *Leptopecten* (L.) *palmeri* (Dall, 1897). Depth: 100 m (F. & L. Poorman, 1988). Length: 71 mm (Wagner & Abbott, 1990).

199 *Leptopecten* (L.) *velero* (Hertlein & Strong, 1946). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 100 m (F. & L. Poorman, 1988).

Genus *Nodipecten* Dall, 1898

Raised from subgenus (Woodring, 1982; Moore, 1984).

201 *Nodipecten magnificus* (Sowerby, 1835). Restricted to the Islas Galápagos, Ecuador; not found on the mainland (Keen & Coan, 1975). Length: 206 mm (Wagner & Abbott, 1990).

202 *Nodipecten subnodosus* (Sowerby, 1835). Include Isla del Coco, Costa Rica, in distribution (Montoya, 1983). Add synonym: *Pecten (Lyropecten) pitteri* Dall, 1912. Depth: intertidal zone to 110 m (Bernard, 1983a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Distribution confirmed to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988). Extend distribution north to Isla Cedros, Mexico (McPeak, 1988). Length: 224 mm (Wagner & Abbott, 1990).

Genus *Oppenheimopecten* Von Teppner, 1922  
Raised from subgenus (Moore, 1984).

179 *Oppenheimopecten hancocki* (Grau, 1959). Extend distribution south to the Islas Galápagos, Ecuador (Finet, 1985).

180 *Oppenheimopecten perulus* (Olsson, 1961). Extend distribution north to Nicaragua (Montoya, López & López, 1987). Length: 36.6 mm (Wagner & Abbott, 1990).

181 *Oppenheimopecten vogdesi* (Arnold, 1906). Distribution: 1°S-28°N (Bernard, 1983a). Length: 111 mm (Wagner & Abbott, 1990).

Genus *Pacipecten* Olsson, 1961

Raised from subgenus (Moore, 1984).

- 200 *Pacipecten tumbezensis* (Orbigny, 1846). Length: 45 mm (Draper, 1987).

Genus *Pseudamussium* Mörch, 1853  
Subgenus *Peplum* Bucquoy, Dautzenberg & Dollfus, 1888

- 204 *Pseudamussium* (*P.*) *fasciculatum* (Hinds, 1845). Extend distribution north to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

Family PROPEAMUSSIIDAE Abbott, 1954  
Used by Waller (1971)  
Genus *Propeamussium* Gregorio, 1884

- 203 *Propeamussium meridionale* (Smith, 1885). Synonym: *Amusium* (*P.*) *malpelsonium* Dall, 1908. Length: 17 mm. Distribution: Gulf of Panama; Pacific, Antarctic, and Indian Oceans. Depth: 1900-4820 m (Knudsen, 1970).

Family SPONDYLIDAE  
Genus *Spondylus* Linnaeus, 1758

- 210 *Spondylus calcifer* Carpenter, 1857. Include Isla del Coco, Costa Rica, in distribution (Bakus, 1975). Depth: 2 to 55 m (Bernard, 1983a). Length: 267 mm (Wagner & Abbott, 1990).

- *Spondylus linguaefelis* Sowerby, 1847. Synonym: *Spondylus gloriosus* Dall, Bartsch & Rehder, 1938; *S. minus* Dall, Bartsch & Rehder, 1938; *S. kuaiensis* Dall, Bartsch & Rehder, 1938 (Kay, 1979). Lamprell (1987) gives the distribution as the Solomon Islands, Hawaii, Philippine Islands and Australia, but fails to cite the L'île Clipperton distribution.

- *Spondylus nicobaricus* Schreibers, 1793. Extend distribution to Isla del Coco, Costa Rica (Shasky, 1983). Synonyms: *S. hystrix* Röding, 1798; *S. radians* Lamarck, 1819; *S. aculeatus* Broderip, 1833; *S. ciliatus* Sowerby, 1847; *S. coccineus* Sowerby & Reeve, 1847; *S. serratissimus* Dall, Bartsch & Rehder, 1938; *S. lindeae* Iredale, 1939; *S. percea* Iredale, 1939; Distribution: Australia; Comoros; Madagascar; Hawaii; Mauritius; Philippines; Solomon Islands (Lamprell, 1987).

- 211 *Spondylus princeps* Broderip, 1833, *non* Schreibers, 1793. Preoccupied (Coan, pers. comm., 1991) Include L'île Clipperton (France), in distribution (Perrin, 1977). Depth:

21 to 41 m (Shasky, 1980). Add synonyms: *Spondylus unicolor* Sowerby, 1847 [212]; *S. limbatus* Sowerby, 1847. Distribution: 5°S-28°N. Depth: 2 to 40 m (Bernard, 1983a). Synonym: *S. victoriae* Sowerby of Durham, 1950, *non* Sowerby, 1859 (Moore, 1987). Length: 202 mm (Draper, 1987).

- *Spondylus tenebrosus* Reeve, 1856. Synonym: *Spondylus hawaiiensis* Dall, Bartsch & Rehder, 1938. Recorded from L'île Clipperton, (France) (Emerson, 1978). Distribution: 10°N (L'île Clipperton); western Pacific, intertidal zone (Bernard, 1983a).

- 212 *Spondylus princeps unicolor* Sowerby, 1847. Delete. Becomes a synonym of *S. princeps* Broderip, 1833 [211] (Bernard, 1983a).

- 213 *Spondylus ursipes* Berry, 1959. Abbott (1974) regarded *S. ursipes* as a synonym of *S. calcifer* Carpenter, 1857. A valid species. Distribution: 27°N-31°N, 10 to 25 m (Bernard, 1983a). Holotype figured (Hertz, 1984). Height: 152.5 mm (Wagner & Abbott, 1990).

- *Spondylus victoriae* (Sowerby, 1859). Distribution: 26°N-30°N. Depth: 10 to 40 m (Bernard, 1983a). Delete. Known only from northwestern Australia and the Northern Territory (Lamprell, 1987).

Order LIMOIDA Waller, 1978  
Superfamily LIMACEA  
Family LIMIDAE  
Genus *Lima* Bruguière, 1797  
Subgenus *Lima*, *s. s.*

- 214 *Lima* (*L.*) *tetrica* Gould, 1851. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 74.3 mm (Draper, 1987). Depth: intertidal zone to 35 m (F. & L. Poorman, 1988).

Genus *Acesta* H. & A. Adams, 1858  
Raised from subgenus (Bernard, 1983a; Moore, 1987).

Subgenus *Acesta*, *s. s.*

- 216 *Acesta* (*A.*) *diomedae* (Dall, 1908). Genus changed from *Lima* (Bernard, 1983a).

- 215 *Acesta* (*A.*) *patagonica* (Dall, 1902). Synonym: *Lima agassizii* Dall, 1902. Genus changed from *Lima*. Distribution: 14°S-53°S except for a single valve from Bahía de Panama which

Bernard (1983a) states is probably a misplaced specimen.

Genus *Limaria* Link, 1807

Raised from subgenus. Synonyms: *Submantellum* Olsson & Harbison, 1953; *Promantellum* Iredale, 1939 (Vokes, 1973).

Subgenus *Limaria*, s. s.

- 217 *Limaria* (L.) *hemphilli* (Hertlein & Strong, 1946). Extend distribution south to Tumbes, Peru (Peña, 1971). Shell figured (Gemmell, Myers & Hertz, 1981). Length: 37 mm (Draper, 1987).
- 220 *Limaria* (L.) *orbignyi* (Lamy, 1930). Shell figured (Gemmell, Myers & Hertz, 1981). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 32.2 mm (Draper, 1987).
- 219 *Limaria* (L.) *pacifica* (Orbigny, 1846). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 32.5 mm (Draper, 1987).

Genus *Limatula* Wood, 1839

Raised from subgenus (Abbott, 1974).

- 218 *Limatula* *similaris* (Dall, 1908). Distribution: 9°S-28°N (Bernard, 1983a). Extend distribution across Gulf of California to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

Superfamily ANOMIACEA

Family ANOMIIDAE

Genus *Anomia* Linnaeus, 1758

Subgenus *Anomia*, s. s.

- 221 *Anomia* (A.) *adamas* Gray, 1850. Extend distribution south to Pimentel, Peru (Peña, 1971). Depth: intertidal zone to 35 m (F. & L. Poorman, 1988).
- 222 *Anomia* (A.) *fidenas* Gray, 1850. Distribution: 9°N-25°N (Bernard, 1983a).
- 223 *Anomia* (A.) *peruviana* Orbigny, 1846. Add synonyms: ?*Anomia laqueata* Reeve, 1859; *A. limatula* Dall, 1878. Add L'île Clipperton (France), and the Islas Galápagos, Ecuador, to distribution. Depth: intertidal zone to 130 m (Bernard, 1983a). Length: 84.4 mm (Draper, 1987).

Genus *Pododesmus* Philippi, 1837

Subgenus *Pododesmus*, s. s.

- 226 *Pododesmus* (P.) *foliatus* (Broderip, 1834). Synonym: *Pododesmus puntarensis* Soot-Ryen, 1952. Distribution: 4°S-23°N (Bernard, 1983a).

Subgenus *Monia* Gray, 1850

- 227 *Pododesmus* (M.) *macrochisma* (Deshayes, 1839). Add synonym: ?*Placunanomia alope* Gray, 1849 (Keen & Coan, 1975). Widely distributed on both sides of the northern Pacific. Shell and anatomy figured (Yonge, 1977). Distribution: 28°N-58°N (Bernard, 1983a). Synonyms: *Pododesmus* (M.) *cepio* (Gray, 1850); ?*Pododesmus newcombei* Arnold & Clark, 1923. Delete ?*Placunanomia alope* Gray, 1849, as a synonym. Distribution: Alaska to Baja California Sur, Mexico; Japan (Moore, 1987). Length: 128.4 mm (Draper, 1987). Extend distribution into the Gulf of California to Bahía San Carlos, Sonora, Mexico. On pilings in estero (F. & L. Poorman, 1988). Delete distribution to Bahía San Carlos, Sonora, Mexico (Poorman, pers. comm., 1990).

Subgenus *Tedinia* Gray, 1853

- 228 *Pododesmus* (T.) *pernoides* (Gray, 1853). Extend distribution south to Oaxaca, Mexico (Abbott, 1974).

Family PLACUNIDAE Yonge, 1977

Genus *Placunanomia* Broderip, 1832

- 224 *Placunanomia cumingii* Broderip, 1832. Shell and anatomy figured (Yonge, 1977). Length: 89.6 mm (Draper, 1987). Extend distribution north to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

Subclass HETERODONTA

Order VENEROIDA

Superfamily CRASSATELLACEA

Family CRASSATELLIDAE

Follows Coan (1979, 1984a).

Subfamily CRASSATELLINAE Férussac, 1822

Genus *Eucrassatella* Iredale, 1924

Synonyms: *Hybolophus* Stewart, 1930; *Eucrassinella* Cruz-P., 1980 (Coan, 1984a).

- 229 *Eucrassatella antillarum* (Reeve, 1842). Lectotype figured. Add synonyms: *Crassatella laevis* A. Adams, 1854; *C. adelinae* Tryon, 1872; *C. digueti* Lamy, 1917; *Crassatellites laronus* Jordan, 1932; *Eucrassinella manabiensis* Cruz-P., 1980 [in part]. Length: 105.2 mm. Distribution: Cabo San Lucas, Baja California Sur, Mexico, throughout the Gulf of California, to Playas, Guayas Province, Ecuador; Venezuela. Depth: 5 to 206 m (Coan, 1984a). Length: 105.2 mm (Draper, 1987).
- 230 *Eucrassatella gibbosa* Sowerby, 1832. Lectotype figured. Add synonyms: *Eucrassatella (Hybolophus) gibbosa tucilla* Olsson, 1932; *Eucrassinella manabiensis* and *E. aequitorialis* Cruz-P., 1980. Length: 87.4 mm. Distribution: Bahía San Juanico, west coast of Baja California Sur, Mexico, throughout the Gulf of California, to Paita, Piura Province, Peru. Depth: 5 to 110 m (Coan, 1984a). Length: 87.4 mm (Draper, 1987).

Subfamily SCAMBULINAE Chavan, 1952

Genus *Crassinella* Guppy, 1874.

Synonym: *Pseuderiphyla* Fischer, 1887 (Coan, 1979).

- 231 *Crassinella adamsi* Olsson, 1961. Depth: 90 m (Cruz-P., 1977). Holotype figured. Depth: 9 to 100 m (Coan, 1979). *Crassinella aduncata* Weisbord, 1964, is a cognate species in the Caribbean (Coan, 1984a).
- *Crassinella coxa* Olsson, 1964. Holotype figured. Length: 2.3 mm. Distribution: west coast of Baja California Sur; Isla Coronados, Gulf of California; Bahía San Ignacio, Sinaloa, Mexico, south to Colombia. Depth: 36 to 160 m (Coan, 1979).
- 232 *Crassinella ecuadoriana* Olsson, 1961. Depth: 51 m (Cruz-P., 1977). Holotype figured. Length: 4.4 mm. Add La Paz, Baja California Sur, Mexico, to distribution. Depth: low intertidal zone to 55 m (Coan, 1979).
- 233 *Crassinella mexicana* Pilsbry & Lowe, 1932. Delete. Becomes synonym of *Crassinella pacifica* (C. B. Adams, 1852) [234] (Coan, 1979).
- *Crassinella nuculiformis* Berry, 1940. Holotype figured. Synonym: *Crassinella clementia* Pilsbry & Olsson, 1941. Length: 5.3 mm. Distribution: Isla Cedros, west coast of Baja California, to

and throughout the Gulf of California, south to Ecuador. Depth: low intertidal zone to 62 m (Coan, 1979). *Crassinella maldonadoensis* (Pilsbry, 1897) is a cognate species from Uruguay (Coan, 1984a).

- 234 *Crassinella pacifica* (C.B. Adams, 1852). Depth to 90 m (Cruz-P., 1977). Holotype figured. Synonyms: *Crassinella quentinensis* Manger, 1934; *C. branneri* Arnold, 1903; *C. mexicana* Pilsbry & Lowe, 1932 [233]. Length: 10 mm. Distribution: Orange County, California, along the outer coast of Baja California, to and throughout the Gulf of California, Mexico, and south to Tumbes Province, Peru. Depth: low intertidal zone to 158 m (Coan, 1979).
- *Crassinella skoglundae* Coan, 1979. Holotype figured. Length: 5.9 mm. Distribution: Bahía de las Banderas, Nayarit, to Acapulco, Guerrero, Mexico. Depth: 11 to 28 m (Coan, 1979).
- 235 *Crassinella varians* (Carpenter, 1857). Length: 3.3 mm. Extend distribution north to Cabo Tepoca, Sonora, Mexico (Skoglund, 1974). Depth: 90 m (Cruz-P., 1977). Lectotype figured. Synonyms: *Crassinella goldbaumi* Jordan, 1936; *C. haylocki* Pilsbry & Olsson, 1941. Distribution: Bahía San Juanico, Baja California Sur, to and throughout the Gulf of California, Mexico, and south to the Gulf of Guayaquil, Ecuador. Depth: low intertidal zone to 113 m (Coan, 1979). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985).

#### Family CARDINIIDAE

Genus *Tellidorella* Berry, 1963

- 236 *Tellidorella cristulata* Berry, 1963. Extend distribution south to Esmeraldas, Ecuador (Cruz-P., 1977). Holotype figured (Hertz, 1984). Depth: 110 m (F. & L. Poorman, 1988).

#### Superfamily CARDITACEA

##### Family CARDITIDAE

Subfamily CARDITINAE Bernard, 1983a

Genus *Cardita* Bruguière, 1792

- *Cardita aviculina* (Lamarck, 1819). Synonyms: *Cardita hawaiiensis* Dall, Bartsch & Rehder, 1938; *C. cruda* Dall, Bartsch & Rehder, 1938;

*C. laysana* Dall, Bartsch & Rehder, 1938. Height: 10 mm. Distributed throughout the Indo-Pacific (Kay, 1979). Extend distribution to Isla del Coco, Costa Rica (Shasky, 1985). Figured (Shasky, 1986b).

Subfamily CARDITESINAE Chavan, 1969

Genus *Cardites* Link, 1807

Raised from subgenus (Abbott, 1974).

- 239 *Cardites crasscostata* (Sowerby, 1825). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 75.5 mm (Wagner & Abbott, 1990).
- 240 *Cardites grayi* (Dall, 1903). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 47.3 mm (Wagner & Abbott, 1990).
- 241 *Cardites laticostata* (Sowerby, 1833). Add synonyms: *Cardita turgida* Valenciennes, 1856; *C. reeveana* Clessin, 1888. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 51.5 mm (Wagner & Abbott, 1990).

Genus *Strophocardia* Olsson, 1961

Raised from subgenus (Bernard, 1983a).

- 244 *Strophocardia megastrophia* (Gray, 1825). Length: 57.5 mm (Wagner & Abbott, 1990).

Subfamily CARDITAMERINAE Chavan, 1969

Genus *Carditamera* Conrad, 1838

Raised from subgenus (Abbott, 1974).

- 237 *Carditamera affinis* Sowerby, 1833. Extend distribution south to Máncora, Peru (Olsson, 1961). Changed from genus *Cardita* (Abbott, 1974). As genus *Cardita* (*Byssomera*). Add synonyms: *Cardita volucris* Reeve, 1843; ?*Cardita incrassatus* Carpenter, 1857. Distribution: 4°S-29°N, including the Islas Galápagos, Ecuador (Bernard, 1983a). Length: 101.2 mm (Draper, 1987).
- 238 *Carditamera radiata* (Sowerby, 1833).

Genus *Cyclocardia* Conrad, 1867.

Raised from subgenus (Hertlein & Grant, 1972).

- 242 *Cyclocardia beebei* (Hertlein, 1958). Extend

distribution south to Pimentel, Peru (as *C. s. beebei*) (Peña, 1971). Not a subspecies of *Cardita spurca* Sowerby, 1833 (Bernard, 1983a). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 100m (F. & L. Poorman, 1988).

Genus *Pleuromeris* Conrad, 1867

Raised from subgenus (Abbott, 1974).

- 243 *Pleuromeris guanica* Olsson, 1961.

Superfamily CORBICULACEA

Family CORBICULIDAE

Genus *Polymesoda* Rafinesque, 1828

Subgenus *Polymesoda*, s. s.

- *Polymesoda* (*P.*) *acuta* (Prime, 1861). Distribution: 1°N, intertidal zone (Bernard, 1983a).
- 247 *Polymesoda* (*P.*) *mexicana* (Broderip & Sowerby, 1829). Add synonym: *Cyrena insignis* Deshayes, 1855 (Bernard, 1983a).

Subgenus *Egeta* H. & A. Adams, 1858

- 249 *Polymesoda* (*E.*) *altilis* (Gould, 1853). Distribution: 12°N-23°N (Bernard, 1983a).
- 250 *Polymesoda* (*E.*) *anomala* (Deshayes, 1855). Add synonyms: *Cyrena* (*Anomala*) *cumingii* Deshayes, 1855; *C. cardiformis* Sowerby, 1876. Delete as synonym: *C. peruviana* Deshayes, 1855 (Bernard, 1983a).
- 251 *Polymesoda* (*E.*) *inflata* (Philippi, 1851). Correct dates on synonyms *Cyrena maritima* C.B. Adams, 1852, non Orbigny, 1842, and *Cyrena panamensis* Prime, 1861 (Keen & Coan, 1975). Add synonyms: *Cyrena peruviana* Deshayes, 1854; *C. bullata* Sowerby, 1878. Delete as synonym: *C. cardiformis* Sowerby, 1878 (Bernard, 1983a).

Subgenus *Neocyrena* Crosse & Fischer, 1894

- 253 *Polymesoda* (*N.*) *fontainei* (Orbigny, 1844). Distribution: 1°S-18°S (Bernard, 1983a).
- 255 *Polymesoda* (*N.*) *nicaraguana* (Prime, 1869). Distribution: 8°N-12°N (Bernard, 1983a).
- *Polymesoda* (*N.*) *triangulata* (Busch, 1849). Distribution: 23°N, intertidal (Bernard, 1983a).

## Superfamily DREISSENACEA

## Family DREISSENIDAE

Genus *Mytilopsis* Conrad, 1858

- 257 *Mytilopsis adamsi* Morrison, 1946. Bernard (1983a) makes *Mytilopsis adamsi* Morrison, 1946, and *M. zeteki* Hertlein & Hanna, 1949 [259], synonyms of *Mytilopsis leucophaeta* (Conrad, 1858) and includes the Caribbean and North Atlantic in distribution. Marelli & Gray (1983) redescribe and figure *M. leucophaeta* and confine it to the brackish waters of the Atlantic.
- *Mytilopsis sallei* (Récluz, 1849). Extend distribution to the Gatún and Miraflores Locks, Panama Canal (Rosewater, 1976). Synonyms: *Dreissena domingensis* Récluz, 1852; *Tichogonia pfeifferi* Dunker, 1853; *T. rossmaessleri* Dunker, 1853; *T. riisei* Dunker, 1853; *Dreissena gundlachii* Dunker, 1855; *D. moerchiana* Dunker, 1855; *Mytilopsis allyneana* Hertlein & Hanna, 1949. Redescribed and figured. Distribution: brackish waters in southern Florida; Yucatan, Mexico, to Venezuela; West Indies. Introduced to Fiji and eastern India (Marelli & Gray, 1983).

## Superfamily GLOSSACEA

## Family VESICOMYIDAE

Genus *Vesicomya* Dall, 1886Subgenus *Vesicomya*, s. s.

- 261 *Vesicomya* (*V.*) *ovalis* (Dall, 1896). Distribution: Alaska to Panama (Abbott, 1974).
- *Vesicomya* (*V.*) *stearnsii* (Dall, 1895). Distribution: La Jolla, California, to the Gulf of California, Mexico (Abbott, 1974). Delete. Distribution: 45°N-48°N, is not within the Panamic Province (Bernard, 1983a).

Subgenus *Callogonia* Dall, 1889

- *Vesicomya* (*C.*) *suavis* Dall, 1913. As subgenus *Archivesica*. Length: 34 mm. West of Isla Tiburón, Gulf of California, Mexico. Depth: 1345 m (Dall, 1913). Subgenus changed from *Archivesica* (Bernard, 1983a).

Genus *Calyplogena* Dall, 1891Subgenus *Archivesica* Dall, 1908

- 262 *Calyplogena* (*A.*) *gigas* (Dall, 1908). Distribution: Point Sur, California, to the Gulf of California, Mexico (Abbott, 1974). Genus changed from *Vesicomya*. Distribution: 27°N-52°N (Bernard, 1983a).

Subgenus *Ectenagena* Woodring, 1938

- *Calyplogena* (*E.*) *magnifica* Boss & Turner, 1980. Length: 263 mm. Galápagos Rift thermal vents. Also known from the East Pacific Rise vents. Depth: 2600 m (Boss & Turner, 1980).

## Superfamily ARCTICACEA

## Family KELLIELLIDAE Fischer, 1887

Genus *Kelliella* M. Sars, 1870

- *Kelliella galathea* Knudsen, 1970. Length: 5.2 mm. Distribution: off southern Baja California, Mexico. Depth: 2950 to 3570 m (Knudsen, 1970). Distribution: 6N-48N (Bernard, 1983a).

## Superfamily LUCINACEA

## Family LUCINIDAE

## Subfamily LUCININAE

Genus *Lucina* Bruguière, 1797Subgenus *Callucina* Dall, 1901

- 268 *Lucina* (*C.*) *lamprea* (Dall, 1901). As subgenus *Cavilinga* (Bretsky, 1976). Drawing of figured type (Gemmell, Myers & Hertz, 1987). Length: 19.2 mm (Draper, 1987). As subgenus *Callucina* (Moore, 1988).
- 269 *Lucina* (*C.*) *lingualis* Carpenter, 1864. As subgenus *Cavilinga* (Bretsky, 1976). As subgenus *Callucina* (Moore, 1988).
- 270 *Lucina* (*C.*) *prolongata* Carpenter, 1857. Add Gulf of California to distribution (Keen & Coan, 1975). Extend distribution south to Esmeraldas, Ecuador. Depth to 90 m (Cruz-P., 1977). Changed from subgenus *Cavilinga* (Bernard, 1983a).

Subgenus *Lucinisca* Dall, 1901

As a genus (McLean, 1978), and as a subgenus (Bernard, 1983a).

- 272 *Lucina* (*L.*) *centrifuga* (Dall, 1901). Extend distribution south to Paita, Piura Province, Peru (as *L. liana*) (Peña, 1971). Depth:

intertidal zone to 100 m. Distribution: 4°S-29°N, including the Islas Galápagos, Ecuador (Bernard, 1983a). Length: 24 mm (Draper, 1987).

- 273 *Lucina* (L.) *fenestrata* Hinds, 1845. Synonyms: *Lucina ochracea* Reeve, 1850; *L. (Luciniscia) fausta* Pilsbry & Olsson, 1941 (Bernard, 1983a). Length: 49.3 mm (Draper, 1987).

- *Lucina* (L.) *nuttalli* Conrad, 1837. Distribution: Santa Barbara, California, to San Felipe, Baja California; Punta Peñasco, Sonora, south to Manzanillo, Colima, Mexico. Depth: littoral zone to 461 m (Hertlein & Grant, 1972). Include Islas Tres Marias, Mexico, in distribution (McLean, 1978). Distribution: 22°N-37°N. Depth: 10 to 75 m (Bernard, 1983a). Length: 31.3 mm (Draper, 1987).

Genus *Here* Gabb, 1866

Used as subgenus of *Linga* by Abbott (1974), and as a genus by Bernard (1983a) and Moore (1988).

Subgenus *Here*, s. s.

- 271 *Here* (H.) *excavata* (Carpenter, 1857). Synonym: *Lucina richthofeni* Gabb, 1866. Distribution: San Pedro, California, to Mazatlán, Sinaloa, Mexico (Hertlein & Grant, 1972). Good drawings (Gemmell, Myers & Hertz, 1987).

Genus *Parvilucina* Dall, 1901

As a genus (Abbott, 1974), a subgenus (Bernard, 1983a), and a genus (Moore, 1988).

Subgenus *Parvilucina* s. s.

- 274 *Parvilucina* (P.) *approximata* (Dall, 1901). Extend distribution north to Monterey, California (Abbott, 1974).
- 275 *Parvilucina* (P.) *mazatlanica* (Carpenter, 1857). Distribution: Gulf of California, Mexico, to Ecuador (Abbott, 1974).

Genus *Linga* de Gregorio, 1884

Subgenus *Pleurolucina* Dall, 1901

- 276 *Linga* (P.) *cancellaris* (Philippi, 1846). Extend distribution into the Gulf of California near Santa Rosalia, Baja California Sur, Mexico

(Draper, 1972). *Radiolucina* as a subgenus (Britton, 1972). As *Linga* (*Bellucina*) by Abbott (1974). Distribution: 28°N-31°N (Bernard, 1983a). Extend distribution into the Gulf of California at Bahía San Carlos, Sonora, Mexico. Depth to 100 m (F. & L. Poorman, 1988). As *Linga* (*Pleurolucina*) by Moore (1988).

- 277 *Linga* (P.) *leucocymoides* (Lowe, 1935). Genus changed from *Lucina* (Abbott, 1974). Length: 17.5 mm (Draper, 1987). Extend distribution to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

- 278 *Linga* (P.) *undatoides* (Hertlein & Strong, 1945). Genus changed from *Lucina* (Abbott, 1974). Extend distribution to Bahía de los Angeles, Baja California, Mexico. Depth: 15 to 18 m (Hertz, 1977).

Genus *Codakia* Mörch, 1860

Subgenus *Codakia*, s. s.

- 279 *Codakia* (C.) *distinguenda* (Tryon, 1872). As subgenus *Ctena* by Abbott (1974). As *Codakia*, s. s. Include L'île Clipperton (France), in distribution (Bernard, 1983a). Extend distribution south to the Islas Galápagos, Ecuador (Finet, 1985). Include Isla Gorgona, Colombia, in distribution (Von Prahl, 1986). Occurs at San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987). Length: 142 mm (Draper, 1987).

- *Codakia* (C.) *punctata* (Linnaeus, 1758). Synonym: *Codakia thaenumi* Pilsbry, 1918. Distribution: 1°S-9°N, including L'île Clipperton (France) and the Islas Galápagos, Ecuador; Indo-Pacific. Depth: intertidal to 5 m (Bernard, 1983a).

Subgenus *Epilucina* Dall, 1901

- *Codakia* (*Epilucina*) *californica* Conrad, 1837. As *Lucina* (*Epilucina*). Synonym: *Lucina artemidis* Carpenter, 1857. Distribution: 17°N-42°N. Depth: 30 to 75 m (Bernard, 1983a). Genus changed from *Lucina*. Distribution: northern California to Baja California Sur, Mexico (Moore, 1988).

Genus *Ctena* Mörch, 1860

Subgenus *Ctena*, s. s.

*Ctena* as a subgenus of *Codakia* by Bretsky (1976), and as a genus (Moore, 1988).

- 280 *Ctena* (*C.*) *chiquita* (Dall, 1901). Extend distribution into the Gulf of California near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Distribution confined: 28°N-31°N (Bernard, 1983a). Extend distribution across the Gulf of California to Bahía San Carlos area, Sonora, Mexico (F. & L. Poorman, 1988).
- 281 *Ctena* (*C.*) *clarionensis* Hertlein & Strong, 1946. Extend distribution into the Gulf of California to the Bahía San Carlos area, Sonora, Mexico. Depth to 35 m (F. & L. Poorman, 1988).
- 282 *Ctena* (*C.*) *clippertonensis* Bartsch & Rehder, 1939. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972).
- 283 *Ctena* (*C.*) *galapagana* (Dall, 1901). Extend distribution south to Pimentel, Peru (Peña, 1971). Height: 19 mm (Keen & Coan, 1975). Extend distribution north to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988). Delete distribution to Bahía San Carlos (Poorman, pers. comm., 1990).
- 284 *Ctena* (*C.*) *mexicana* (Dall, 1901). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Good drawings (Gemmell, Myers & Hertz, 1987). Length: 25.5 mm (Draper, 1987).

Subfamily DIVARICELLINAE

Genus *Divalinga* Chavan, 1951

Subgenus *Divalinga*, s. s.

- 285 *Divalinga* (*D.*) *eburnea* (Reeve, 1850). Genus changed to *Divaricella* (Bretsky, 1976). As *Divaricella*. Hinge figured (Gemmell, Myers & Hertz, 1981). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Length: 27.5 mm (Draper, 1987). Extend distribution into the Gulf of California at Bahía San Carlos, Sonora, Mexico. Depth to 60 m (F. & L. Poorman, 1988). As *Divalinga* (*D.*) by Moore (1988).

Subgenus *Viaderella* Chavan, 1951

- 286 *Divalinga* (*V.*) *perparvula* (Dall, 1901). Extend distribution north to Laguna de Agiabampo, Sonora/Sinaloa, Mexico (García-Cubas & Reguero, 1987).

Subfamily MILTHINAE

Genus *Miltha* H. & A. Adams, 1857

- 287 *Miltha* *xantusi* (Dall, 1905). Synonym: *Phacoides joannis* Dall, 1905. Distribution: Guaymas, Sonora, to Mazatlán, Sinaloa; La Paz to Cabo San Lucas, Baja California Sur, Mexico. Depth: 33 to 101 m (Hertlein & Grant, 1972). Synonym: *P. (Miltha) sanctaecrucis* Arnold, 1910 (Bernard, 1983a).

Genus *Pegophysema* Stewart, 1930

Subgenus *Pegophysema*, s. s.

- 288 *Pegophysema* (*P.*) *edentuloides* (Verrill, 1870). Length: 92 mm (Goldsmith, 1971). Genus changed to *Anodontia* (Bretsky, 1976). As *Pegophysema*. Distribution: 28°N-30°N (Bernard, 1983a). As *Pegophysema* (*P.*) (Moore, 1988).

Subfamily MYRTAEINAE

Genus *Lucinoma* Dall, 1901

As a subgenus (Bretsky, 1976), and a genus (Bernard, 1983a).

- *Lucinoma* *aequizonata* (Stearns, 1891). Distribution: Santa Barbara Islands, California, to Chile. Depth: 505 m (Abbott, 1974). Delete. Distribution restricted to 34°N-60°N (Bernard, 1983a).
- 289 *Lucinoma* *annulata* Reeve, 1850. Distribution: Alaska to Bahía Santa Inez, Baja California Sur, Mexico (Hertlein & Grant, 1972). Moved to genus *Miltha*, subfamily Milthinae (Bretsky, 1976). As subfamily Myrtaeinae, genus *Lucinoma*. Synonyms: *Lucinoma densilineata* Dall, 1916; *L. annulata densilirata* Dall, 1919; *Lucina spectabilis* Yokoyama, 1920; *Woodia concentrica* Yokoyama, 1920. Distribution: 33°N-60°N (Bernard, 1983a). Dredged Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988). Dredged at Isla Smith, Bahía de los Angeles, Baja California, Mexico. Depth: 183 m (Skoglund, 1988). Moved from subfamily Milthinae (Moore, 1988).

Family UNGULINIDAE  
Genus *Diplodonta* Bronn, 1831  
Subgenus *Diplodonta*, s. s.

- 291 *Diplodonta* (*D.*) *inezensis* (Hertlein & Strong, 1947). Extend distribution north to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987). Extend distribution across Gulf of California to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1982). Length: 24.4 mm (Draper, 1987).
- *Diplodonta* (*D.*) *orbella* (Gould, 1851). Distribution: Monterey, California, to Punta Peñasco, Sonora, Mexico. Depth: Low tide zone to 110 m (Hertlein & Grant, 1972). Distribution: Pribilof Islands, Alaska, to the Gulf of California, Mexico (McLean, 1978). Holotype figured. Distribution: Monterey, California, throughout the Gulf of California, Mexico, to Panama (Hertz, Myers & Gemmell, 1982). Synonym: *Sphaerella tumida* Carpenter, 1864. Distribution: 8°N-60°N. Depth: intertidal zone to 65 m (Bernard, 1983a). Length: 35.1 mm (Draper, 1987).
- 292 *Diplodonta* (*D.*) *subquadrata* (Carpenter, 1856). Synonym: *Diplodonta subquadrata baltrana* Hertlein, 1972 (Bernard, 1983a). Syntype figured. Camera lucida drawings of hinge. Synonym: *Diplodonta suprema* Olsson, 1961 [293]. Holotype figured. Distribution: Isla San Benito on the west coast of Baja California, throughout the Gulf of California, to Ecuador including the Islas Galápagos (Hertz, Myers & Gemmell, 1982).
- 293 *Diplodonta* (*D.*) *suprema* Olsson, 1961. Delete. A synonym of *Diplodonta subquadrata* (Carpenter, 1856) [292] (Hertz, Myers & Gemmell, 1982).

Genus *Felaniella* Dall, 1899  
Subgenus *Zemysia* Finlay, 1927

- 294 *Felaniella* (*Z.*) *obliqua* (Philippi, 1845). Synonym: *Lucina calculus* Reeve, 1850. Distribution: 10°N-42°S (Bernard, 1983a). Extend distribution north to Laguna de Topolobampo, Sinaloa, Mexico (García-Cubas & Reguero, 1987).
- 295 *Felaniella* (*Z.*) *cornea* (Reeve, 1850). Bernard (1983a) made *Felaniella sericata* (Reeve, 1850)

a synonym of *Felaniella* (*Z.*) *parilis* (Conrad, 1983). Valve interior figured (Gemmell, Myers & Hertz, 1987). Moore (1988) restricted *F. parilis* to fossil material and made *F. sericata* a synonym of *F. cornea*.

Genus *Phlyctiderma* Dall, 1899  
Subgenus *Phlyctiderma*, s. s.

- 296 *Phlyctiderma* (*P.*) *discrepans* (Carpenter, 1857). Hinge dentition figured (Gemmell, Myers & Hertz, 1987). Depth: 35 m (F. & L. Poorman, 1988).

Subgenus *Pegmapex* Berry, 1960

- 299 *Phlyctiderma* (*P.*) *caelatum* (Reeve, 1850). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985).
- 300 *Phlyctiderma* (*P.*) *phoebe* (Berry, 1960). Holotype figured (Hertz, 1984). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 35 m (F. & L. Poorman, 1988).

Family THYASIRIDAE  
Subfamily THYASIRINAE  
Dall, 1900 (Bernard, 1983a)  
Genus *Conchocele* Gabb, 1866

- 302 *Conchocele excavata* (Dall, 1901). Add synonym: *Thyasira tricarinata* Dall, 1916. Genus changed from *Thyasira*. Distribution: 23°N-45°N. Depth: 800 to 2050 m. Shallow water (18 to 90 m) records from the Gulf of California, Mexico, are not for this species (Bernard, 1983a).

Subfamily AXINOPSIDINAE Bernard, 1983a  
Genus *Adontorhina* Berry, 1947

- *Adontorhina cyclia* Berry, 1947. Distribution: Bahía de los Angeles, Gulf of California, Mexico; from the Bering Sea, Alaska, to Isla Guadalupe, Baja California, Mexico. Depth: 11.6 to 1886 m. Figured (Scott, 1986).

Superfamily GALEOMMATACEA  
Family GALEOMMATIDAE  
Genus *Bellascintilla* Coney, 1990

- *Bellascintilla parmaleeana* Coney, 1990. Length: 4.5 mm. Shell and hinge figured. Distribution: Rancho El Tule, Baja California Sur, Mexico, to Isla Salango, Manabí Province, Ecuador (Coney, 1990).

Genus *Cymatioa* Berry, 1964

- 303 *Cymatioa dubia* (Deshayes, 1856). Distribution: 1°S-3°S. Depth: intertidal zone to 10 m (Bernard, 1983a).  
 304 *Cymatioa electilis* (Berry, 1963). Hinge figured (Gemmell, Myers & Hertz, 1981). Distribution: 1°S-28°N (Bernard, 1983a). Holotype figured (Hertz, 1984). Found attached to the burrow of the shrimp *Axius* (Baldwin, 1990). Correct shrimp name to *Axiopsis* cf. *A. serratifrons* (A. Milne Edwards, 1873) (Hertz [ed.], 1990).

Genus *Galeommella* Habe, 1958

- 306 *Galeommella peruviana* (Olsson, 1961). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).

Genus *Tryphomyax* Olsson, 1961

- 307 *Tryphomyax lepidiformis* Olsson, 1961. Regarded as a synonym of *Tryphomyax mexicanus* (Berry, 1959) [308] by Bernard (1983a). Valid species. Shell and hinge figured. Single valve reported from Bahía la Cholla, Sonora, Mexico, may be a labeling error, as all others of this species are from Panama (Coney, 1990).  
 308 *Tryphomyax mexicanus* (Berry, 1959). Synonym: *Tryphomyax lepidiformis* Olsson, 1961 [307]. Distribution: 9°N-31°N (Bernard, 1983a). Holotype figured (Hertz, 1984). Delete *T. lepidiformis* Olsson as a synonym. Shell and hinge figured. Distribution: throughout the Gulf of California as far south as Punta Arena, Baja California Sur, Mexico (Coney, 1990).

Family ERYCINIDAE

Subfamily ERYCINIINAE

Deshayes, 1850 (Bernard, 1983a)

Genus *Amerycina* Chavan, 1959

- 309 *Amerycina colpoica* (Dall, 1913). Extend distribution to the Islas Galápagos, Ecuador (Bernard, 1983a).  
 310 *Amerycina cultrata* Keen, 1971. Extend distribution north to Guaymas, Sonora, Mexico. Depth: 91 m (Keen & Coan, 1975).

Subfamily LASAEINAE

Gray, 1842 (Bernard, 1983a)

Genus *Lasaea* Brown, 1827, ex Leach MS

- *Lasaea cistula* Keen, 1938. Distribution: British Columbia to Peru (Abbott, 1974). Synonym: *Erycina catalinae* Dall, 1916, *nom. nud.* Delete. Distribution (28°N-40°N), is north of the Panamic Province (Bernard, 1983a).  
 311 *Lasaea subviridis* Dall, 1899. *Lasaea adansoni* (Gmelin, 1871) used with *L. subviridis* as a subspecies. Distribution: Monterey California to La Paz, Baja California Sur, Mexico; southeastern Florida; Bermuda; Brazil; Europe (Abbott, 1974). *L. subviridis* as a species. Synonym: *Lasaea rubra subviridis* Stearns, 1894, ex Carpenter MS. Distribution: 23°N-55°N (Bernard, 1983a). Delete *Lasaea rubra subviridis* Stearns, 1894, *nom. nud.*, as a synonym. Syntypes designated for *Lasaea subviridis* Dall, 1899 (Coan, 1987). Cannot be distinguished from *Lasaea cistula* Keen, 1938, by morphology alone (O Foighil & Eernisse, 1988).

Genus *Pseudopythina* Fischer, 1878

- *Pseudopythina compressa* (Dall, 1899). Length: 18 mm. Distribution: Alaska to Acapulco, Guerrero, Mexico, as genus *Neaeromya*, family Leptonidae. Depth: 7 to 51 m (Abbott, 1974). Family and genus changed. Depth: 258 m (Rosewater, 1984).  
 --- *Pseudopythina muris* Rosewater, 1984. Off northwestern Peru. Depth: 90 to 133 m. Living in the respiratory cavity of the sea mouse *Aphrodita japonica* (Rosewater, 1984).  
 341 *Pseudopythina stearnsii* (Dall, 1899). Genus changed from *Sportella* to *Neaeromya*, family Leptonidae (Abbott, 1974). Changed to family Lasaeidae, genus *Pseudopythina* by Rosewater (1984).

## Family KELLIIDAE

## Subfamily KELLIINAE

Forbes &amp; Hanley, 1989 (Bernard, 1983a)

Genus *Kellia* Turton, 1822

- *Kellia laperoussii* (Deshayes, 1839). Length: 25 mm. Depth: intertidal zone to sublittoral depths. Distribution: Bering Sea, Alaska, to the Gulf of California, Mexico (McLean, 1978). Delete. Becomes a synonym of *Kellia suborbicularis* (Montagu, 1803) [312] (Bernard, 1983a).
- 312 *Kellia suborbicularis* (Montagu, 1803). Synonyms: *Tellimya lactea* Brown, 1827; *T. tenuis* Brown, 1827; *?Bornia inflata* Philippi, 1836; *Chironia laperoussii* Deshayes, 1839; *Bornia luticola* Valenciennes, 1846; *Kellia rotundata* Carpenter, 1864. Distribution: 4°S-60°N, circumboreal; Mediterranean. Depth: intertidal zone to 20 m (Bernard, 1983a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Depth: 60 m (F. & L. Poorman, 1988).

Genus *Aligena* Lea, 1846

- 324 *Aligena cokeri* Dall, 1909. Attaches to tubes of annelid worm *Mesochaetopterus alipes* Monroe, 1933 (Rosewater, 1976).
- 325 *Aligena nucea* Dall, 1913. Hinge figured. Extend distribution south to Panama (Gemmell, Myers & Hertz, 1987).
- 334 *Aligena obliqua* (Harry, 1969). Genus changed from *Orobitella*. Valve interior figured. Extend distribution north to San Felipe, Baja California, and Puerto Peñasco, Sonora, Mexico (Gemmell, Myers & Hertz, 1987).

Subfamily BORNIIINAE Bernard, 1983a

Genus *Bornia* Philippi, 1836

- 313 *Bornia chicalaya* Olsson, 1961. Extend distribution north to San Felipe, Baja California, Mexico (Hertz, 1976). Hinge dentition figured (Gemmell, Myers & Hertz, 1987).
- 315 *?Bornia obtusa* (Carpenter, 1857). Delete here. Holotype is a juvenile *Mysella* of unknown species (Bernard, 1975). See *Mysella*.
- 316 *Bornia papyracea* (Deshayes, 1856). As genus *Rhamphidonta* (Bernard, 1975). As *Bornia*.

Depth: 10 to 50 m (Bernard, 1983a).

Genus *Solecardia* Conrad, 1849

- 322 *Solecardia eburnea* Conrad, 1849. Hinge figured (Gemmell, Myers & Hertz, 1981). Synonym: *Scintilla cumingii* Deshayes, 1856 (Bernard, 1983a). Length: 27.1 mm (Draper, 1987). Depth: 60 m (F. & L. Poorman, 1988).
- 323 *?Solecardia obliqua* (Sowerby, 1862). Delete. *Nom. dub.* (Bernard, 1983a).

## Family LEPTONIDAE

Genus *Lepton* Turton, 1822

- 320 *Lepton ellipticum* (Carpenter, 1857). Question on generic placement removed (Bernard, 1983a). Extend distribution north to Laguna de Agiabampo, Sonora/Sinaloa, Mexico (García-Cubas & Reguero, 1987).
- 321 *Lepton lediforme* Olsson, 1961. Extend distribution north to San Felipe, Baja California, Mexico. Figured (Gemmell, Myers & Hertz, 1987).

## Family MONTACUTIDAE

Subfamily MYSELLINAE Bernard, 1983a

Genus *Mysella* Angas, 1877

- 326 *?Mysella clementina* (Carpenter, 1857). Delete. *Nom. dub.* (Bernard, 1983a). Synonym of *Thracia curta* Conrad, 1837 [760] (Coan, 1990a).
- 328 *?Mysella dionaea* (Carpenter, 1857). Delete. *Nom. dub.* The single known valve is damaged and appears to be without teeth (Scott, 1987).
- *Mysella grippi* (Dall, 1912). Distribution: Oregon to San Diego, California; Gulf of California, Mexico. Depth: 12 to 60 m (Scott, 1987). Distribution confirmed to San Felipe, Baja California, Mexico. Hinge figured (Gemmell, Myers & Hertz, 1987).
- 330 *?Mysella umbonata* (Carpenter, 1857). Delete. *Nom. dub.* The four known valves are in poor condition (Scott, 1987).
- *Mysella* species. Synonym: *?Bornia obtusa* (Carpenter, 1857) [315] (Bernard, 1975). Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972).

Subgenus *Rocheffortia* Velain, 1877

- 327 *Mysella* (*R.*) *compressa* (Dall, 1913). Add subgenus (Bernard, 1983a). Los Angeles County, California, is the northern limit of the distribution. Depth: 5 to 64 m (Scott, 1987). Depth: 100 m (F. & L. Poorman, 1988).

Subfamily OROBITELLINAE Bernard, 1983a  
Genus *Orobitella* Dall, 1900

- 331 *Orobitella bakeri* (Dall, 1916). Synonyms: *Erycina chacei* Dall, 1916, *nom. nud.*; ?*Erycina santarosae* Dall, 1916 (Bernard, 1983a).  
334 *Orobitella obliqua* (Harry, 1969). Delete here. Genus changed. See *Aligena*.  
335 *Orobitella oblonga* (Carpenter, 1857). Extend distribution north to Guaymas, Sonora, Mexico (García-Cubas & Reguero, 1987).  
338 *Orobitella trigonalis* (Carpenter, 1857). Delete here. Genus changed. See *Isorobitella*.  
339 *Orobitella zorrita* (Olsson, 1961). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 20 to 30 m (F. & L. Poorman, 1988).

Genus *Isorobitella* Keen, 1962

- 338 *Isorobitella trigonalis* (Carpenter, 1857). Synonym: *Aligena cerritensis* Arnold, 1903. Genus changed from *Orobitella* (Bernard, 1983a).

Genus *Pythinella* Dall, 1899

- 340 *Pythinella sublaevis* (Carpenter, 1857). Extend distribution north to the San Felipe area, Baja California, Mexico. Figured (Gemmell, Myers & Hertz, 1987). Depth: 35 m (F. & L. Poorman, 1988).

Subfamily THECODONTINAE Bernard, 1983a  
Genus *Pristes* Carpenter, 1864

- *Pristes oblongus* Carpenter, 1864. As *Thecodonta* (*Pristes*). Distribution: Monterey, California, to Baja California, Mexico (Abbott, 1974). Extend distribution into the Gulf of California at Cabo Tepoca, Sonora, Mexico. Intertidal zone (Skoglund, 1974). Extend distribution north to Bahía la Cholla, Sonora,

and across the Gulf of California to Bahía de los Angeles, Baja California, Mexico (Skoglund, 1991b).

Superfamily CYAMIACEA  
Family SPORTELLIDAE

Genus *Basterotia* Hornes, 1859, *ex* Mayer MS  
Subgenus *Basterotia*, *s. s.*

- 342 *Basterotia* (*B.*) *peninsularis* (Jordan, 1936). Extend distribution north to Bahía San Carlos area, Sonora, Mexico. Depth to 25 m (F. & L. Poorman, 1988).

Subgenus *Basterotella* Olsson & Harbison, 1953

- 343 *Basterotia* (*B.*) *hertleini* Durham, 1950. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a)

Family BERNARDINIDAE  
Moved from Arcticea (Coan, 1984).  
Genus *Bernardina* Dall, 1910

- 264 *Bernardina margarita* (Carpenter, 1857). Lectotype figured. Distribution: Isla Guadalupe, west coast of Baja California; the Gulf of California to Guaymas, Sonora, and south to Bahía Banderas, Jalisco, Mexico. Depth: intertidal zone to 21 m (Coan, 1984b).

Genus *Halodakra* Olsson, 1961  
Subgenus *Halodakra*, *s. s.*

- 265 *Halodakra* (*H.*) *subtrigona* (Carpenter, 1857). Lectotype figured. Distribution: Tomales Bay, Marin County, California, to and throughout the Gulf of California, Mexico, to Peru. Depth: intertidal zone to 24 m (Coan, 1984b). Include the Islas Galápagos, Ecuador, in distribution (Coan, 1989).

Superfamily CHAMACEA  
Family CHAMIDAE  
Genus *Chama* Linnaeus, 1758  
Subgenus *Chama*, *s. s.*

- *Chama* (*C.*) *arcana* Bernard, 1976. Synonym: *Chama pellucida* Broderip, *auctt., non* Broderip, 1835. Length: 55 mm. Distribution: Yaquina Point, Oregon, to Bahía San Juanico, west

- coast of Baja California Sur, Mexico. Depth: intertidal to 50 m (Bernard, 1976). Extend distribution into the Gulf of California from Bahía de los Angeles, Baja California, to Bahía San Nicholas, Baja California Sur, Mexico (Skoglund, 1991c).
- 346 *Chama* (C.) *buddiana* C. B. Adams, 1852. Extend distribution north to Puerto Parker, Costa Rica. Low intertidal zone to 2 m (Bernard, 1976). Extend distribution north to La Union, El Salvador (Hernández, 1979). Lectotype figured. Synonyms: *Chama mexicana* Carpenter, *auctt.*, *non* Carpenter, 1857 [349]; *C. frondosa fornicata* Carpenter, 1857. Distribution: San Felipe, Baja California, Mexico, to the Islas Galápagos, Ecuador (Hertz, Gemmell & Myers, 1982). Length: 119.9 mm (Wagner & Abbott, 1990).
- 346a *Chama* (C.) *corallina* Olsson, 1971. Holotype figured. Extend distribution north to Sonora, Mexico. Depth: 18 to 95 m (Bernard, 1976).
- 347 *Chama* (C.) *echinata* Broderip, 1835. Syntype figured. Synonym: *Chama delesserti* Chenu, 1846. Distribution: Isla Angel de la Guarda, Gulf of California, Mexico, south to Isla Huanape, northern Peru (Bernard, 1976). Synonym: *Chama frondosa mexicana* Carpenter, 1857 (Hertz, Gemmell & Myers, 1982). No synonyms listed (Moore, 1988). Length: 74 mm (Wagner & Abbott, 1990).
- 348 *Chama* (C.) *frondosa* Broderip, 1835. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Holotype figured. Add synonym: *Chama pacifica* Carpenter, 1857, *ex* Gould MS, *nom. nud.*, *non* Broderip, 1834. Intertidal zone to 25 m, on boulders (Bernard, 1976). Synonym: *Chama producta* Broderip, 1835. Holotype figured (Hertz, Gemmell & Myers, 1982). Extend distribution north to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987). No synonyms listed (Moore, 1988). Length: 126.7 mm (Wagner & Abbott, 1990).
- *Chama* (C.) *garthi* Bernard, 1976. Synonym: *Chama spinosa* Broderip, *auctt.*, *non* Broderip, 1835. Height: 23.7 mm. Distribution: Colombia & Ecuador. Depth: intertidal zone to 22 m (Bernard, 1976).
- 349 *Chama* (C.) *mexicana* Carpenter, 1857. Synonyms: *Chama producta* Broderip, 1835 (*nom. obl.*); *C. purpurascens* Tryon, 1872, *ex* Conrad MS; *C. compacta* Clessin, 1889. Extend distribution south to Guatemala. Depth to 80 m (Bernard, 1976). Delete. Becomes synonym of *C. buddiana* C. B. Adams, 1852 [346] (Hertz, Gemmell & Myers, 1982).
- *Chama* (C.) *pellucida* Broderip, 1835. Distribution: Oregon to Chile; Islas Galápagos (Dall, 1921). Synonym: *Chama chilensis* Philippi, 1887. Holotype of *C. chilensis* figured. Distribution: Paita, Piura Province, Peru, to Chile. Depth: intertidal zone to 30 m (Bernard, 1976).
- 350 *Chama* (C.) *sordida* Broderip, 1835. Syntype figured. Delete *Chama digueti* Rochebrune, 1895, as synonym (Bernard, 1976).
- 351 *Chama* (C.) *squamuligera* Pilsbry & Lowe, 1932. Add synonym: *Chama rubropicta* Bartsch & Rehder, 1939. Add L'île Clipperton (France), to distribution. Depth: subtidal zone to 20 m (Bernard, 1976). Length: 28.8 mm (Draper, 1987). Extend distribution to Mexican mainland at Bahía San Carlos area, Sonora (F. & L. Poorman, 1988). No synonyms listed (Moore, 1988).
- *Chama* (C.) *tinctoria* Bernard, 1976. Height: 37 mm. Distribution: Islas Tres Marias, Mexico, to Panama. Depth: 15 to 92 m (Bernard, 1976).
- 352 *Chama* (C.) *venosa* Reeve, 1847. Holotype figured. Synonym: *Chama digueti* Rochebrune, 1895. Distribution: Isla Angel de la Guarda, Gulf of California, Mexico, to Paita, Piura Province, Peru. Depth: subtidal zone to 4 m (Bernard, 1976).
- Genus *Arcinella* Schumacher, 1817
- 353 *Arcinella californica* (Dall, 1903). Holotype figured. Extend distribution south to Colombia. Depth: 25 to 77 m (Bernard, 1976). Length: 44.3 mm (Draper, 1987). Extend distribution into the Gulf of California at Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).
- Genus *Pseudochama* Odhner, 1917
- 354 *Pseudochama clarionensis* Willett, 1938. Distribution: Isla Clarión, Mexico, south on the mainland coast to Isla del Tigre, Honduras; the Islas Galápagos, Ecuador. Depth: 27 to 55 m (Bernard, 1976).

- 355 *Pseudochama corrugata* (Broderip, 1835). Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Distribution: Isla Partida, Gulf of California, Mexico, to Bahía Sechura, Peru. Depth: intertidal to 5 m (Bernard, 1976).
- 356 *Pseudochama dalli* Bernard, 1976. Synonym: *Chama inermis* Dall, 1871, ex Carpenter MS, non Deshayes, 1863. Distribution: Islas Tres Marias, Mexico, to Panama. Only on wooden pilings, subtidal zone to 5 m (Bernard, 1976).
- *Pseudochama exogyra* (Conrad, 1837). Synonym: *Pseudochama granti* Strong, 1934. Syntype figured. Type locality of *P. granti*: Isla Clarión, Mexico. Distribution: southern British Columbia, Canada, to Isla San Benito, Mexico. Intertidal zone to 155 m (Bernard, 1976). Length: 79.7 mm (Draper, 1987). Type locality of *P. granti* is actually Catalina Island, California (Strong, 1934), which is north of the Panamic Province.
- 357 *Pseudochama janus* (Reeve, 1847). Holotype figured. Endemic to the Islas Galápagos, Ecuador. Depth: 10 to 25 m (Bernard, 1976).
- 358 *Pseudochama panamensis* (Reeve, 1847). Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Holotype figured. Distribution: Bahía San Luis Gonzaga, Baja California, Mexico, to Cabo San Francisco, Ecuador. Depth: midtide zone to 10 m (Bernard, 1976). Length: 46.7 mm (Draper, 1987).
- 359 *Pseudochama saavedrai* Hertlein & Strong, 1946. Holotype figured. Distribution: Puerto Peñasco, Sonora, Mexico, to Panama. Depth: low intertidal zone to 55 m (Bernard, 1976). Length: 71 mm (Wagner & Abbott, 1990).

## Superfamily CARDIACEA

## Family CARDIIDAE

Follows Keen (1980).

## Subfamily TRACHYCARDIINAE

Genus *Trachycardium* Mörch, 1853

*Trachycardium* as a subgenus of *Laevicardium* by Fischer-Piette (1977), and as a genus (Keen, 1980).

Subgenus *Trachycardium*, s. s.

- 360 *Trachycardium (T.) consors* (Sowerby, 1833). Depth: 30 to 100 m (F. & L. Poorman, 1988).

Length: 95.3 mm (Wagner & Abbott, 1990).

Subgenus *Dallocardia* Stewart, 1930

- 362 *Trachycardium (D.) senticosum* (Sowerby, 1833). As *Laevicardium (Trachycardium)* by Fischer-Piette (1977). Fischer-Piette's specimen was not this species. Reinstate as above (Keen, 1980). Depth: intertidal zone (Gemmell, Myers & Hertz, 1987). Length: 122.2 mm (Draper, 1987).

Subgenus *Mexicardia* Stewart, 1930

- 363 *Trachycardium (M.) panamense* (Sowerby, 1833). Height: 114 mm (Draper, 1987).
- 364 *Trachycardium (M.) procerum* (Sowerby, 1833). Add synonym: *Cardium subelongatus* Valenciennes, 1846. Include Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Distribution confirmed to Nayarit, Mexico (Reguero & García-Cubas, 1989). Height: 91 mm (Draper, 1987).

Subgenus *Phlogocardia* Stewart, 1930

- 365 *Trachycardium (P.) belcheri* (Broderip & Sowerby, 1829). As *Laevicardium (Trachycardium)* by Fischer-Piette (1977). As *Trachycardium (P.)* (Keen, 1980). Depth: 80 to 140 m (Bernard, 1983a). Extend distribution south to Isla Gorgona, Colombia (von Prael, 1986). Depth: 35 to 60 m (F. & L. Poorman, 1988).

Genus *Acrosterigma* Dall, 1900

Raised from subgenus (Keen, 1980).

- 361 *Acrosterigma pristipleura* (Dall, 1901). As *Laevicardium (Trachycardium)* by Fischer-Piette (1977), and as *Acrosterigma* (Keen, 1980). Height: 118.9 mm (Wagner & Abbott, 1990).

Genus *Papyridea* Swainson, 1840

- 366 *Papyridea aspersa* (Sowerby, 1833). Depth: 40 to 60 m (F. & L. Poorman, 1988). Length: 62 mm (Draper, 1987).
- 368 *Papyridea mantaensis* Olsson, 1961. Length: 70.1 mm (Draper, 1987).

Subfamily FRAGINAE  
Genus *Trigoniocardia* Stewart, 1930  
Subgenus *Trigoniocardia*, s. s.

- 369 *Trigoniocardia* (T.) *granifera* (Broderip & Sowerby, 1829). As *Corculum* (*Trigoniocardia*) by Fischer-Piette (1977), and as *Trigoniocardia* (Keen, 1980). Length: 16 mm (Draper, 1987). Depth: 35 m (F. & L. Poorman, 1988).

Subgenus *Americardia* Stewart, 1930  
As a genus (Abbott, 1974; McLean, 1978) and a subgenus (Keen, 1980).

- 370 *Trachycardium* (A.) *biangulata* (Broderip & Sowerby, 1829). As *Corculum* (*Trigoniocardia*) by Fischer-Piette (1977), and *Trachycardium* (*Americardia*) by Keen (1980). Synonym: *Cardium modestum* Conrad, 1855, non Philippi, 1845 (Bernard 1983a). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Length: 42.5 mm (Wagner & Abbott, 1990).
- 371 *Trachycardium* (A.) *guanacastensis* (Hertlein & Strong, 1947). As *Corculum* (*Trigoniocardia*) by Fischer-Piette (1977), and *Trachycardium* (*Americardia*) by Keen (1980).

Subgenus *Apiocardia* Olsson, 1961

- 372 *Trachycardium* (A.) *obovalis* (Sowerby, 1833). Extend distribution south to Tumbes, Peru (Peña, 1971). Depth: 51 m (Cruz-P., 1977). Add synonyms: *Hemicardia affinis* Nelson, 1870, non *Cardium affine* Münster, 1835; *Cardium spiekeri* Hanna & Israelsky, 1925 (Bernard, 1983a). Height: 23 mm (Draper, 1987).

Subfamily PROTOCARDIINAE  
Genus *Nemocardium* Meek, 1876  
Subgenus *Lophocardium* Fischer, 1887  
Changed from genus (Keen, 1980).

- 373 *Nemocardium* (L.) *annettae* (Dall, 1889). Depth: intertidal zone to 50 m (Bernard, 1983a).
- 374 *Nemocardium* (L.) *cumingii* (Broderip, 1833). Length: 47.4 mm (Wagner & Abbott, 1989).

Subgenus *Microcardium* Thiele, 1934

- 375 *Nemocardium* (M.) *panamense* (Dall, 1908).

Total ribs 47 to 58 (Olsson, 1961). Synonym: *Microcardium williamsi* Fischer-Piette, 1977 (Keen, 1980).

- 376 *Nemocardium* (M.) *pazianum* (Dall, 1916). Extend distribution south to Esmeraldas, Ecuador (Cruz-P., 1977). Length: 16.9 mm (Draper, 1987). Extend distribution into the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 20 to 100 m (F. & L. Poorman, 1988).

Subfamily LAEVICARDIINAE  
Genus *Laevicardium* Swainson, 1840

- 377 *Laevicardium clarionense* (Hertlein & Strong, 1947). Length: 79.7 mm (Draper, 1987). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 35 to 60 m (F. & L. Poorman, 1988). Extend distribution south to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 378 *Laevicardium elatum* (Sowerby, 1833). Bernard (1983a) states distribution only from 16°N to 34°N. Height: 190 mm (Draper, 1987).
- 379 *Laevicardium elenense* (Sowerby, 1841). Add synonym: *Laevicardium pedernalense* Pilsbry & Olsson, 1941. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).
- *Laevicardium substriatum* (Conrad, 1837). Distribution: Ventura County, California, to the Gulf of California, Mexico (Abbott, 1974). Synonym: *Cardium cruentatum* Gould, 1855. Distribution: 24°N-34°N. Depth: intertidal zone to 40 m (Bernard, 1983a). Length: 28 mm (Draper, 1987).

Superfamily VENERACEA

Family VENERIDAE

Subfamily VENERINAE

Genus *Periglypta* Jukes-Browne, 1914

- 380 *Periglypta multicostata* (Sowerby, 1835). Synonym: *Cytherea caesarina* Dall, 1903 (Tardin Cassab, 1984). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Depth to 20 m (F. & L. Poorman, 1988). Length: 138.6 mm (Wagner & Abbott, 1990). Delete synonym. *Cytherea caesarina* Dall, 1903, is a valid Caribbean fossil species (Pauley, pers. comm., 1991).

Genus *Globivenus* Coen, 1934

Synonym: *Ventricolaria* Keen, 1954 (Turgeon et al., 1988).

- *Globivenus fordi* (Yates, 1890). As genus *Circomphalus* (Abbott, 1974). As *Ventricolaria*. Distribution: 28°N-37°N (Bernard, 1983a). Length: 75.2 mm (Draper, 1987). Extend distribution into the Gulf of California at Isla Smith, Bahía de los Angeles, Baja California, Mexico (Skoglund, 1988). Lectotype figured (Scott, Hochberg & Roth, 1990).
- 381 *Globivenus isocardia* (Verrill, 1870). Extend distribution to Manta, Ecuador (Olsson, 1961). On the basis of a study of illustrations, *Ventricolaria isocardia* placed in the synonymy of Caribbean *V. rigida* (Dillwyn, 1817) (Fischer-Piette, 1975). Extend distribution to the Islas Galápagos, Ecuador (Shasky, 1989). Length: 113.2 mm (Wagner & Abbott, 1990).
- *Globivenus lavezzarii* (Fischer-Piette, 1975). As *Venus*. Peru. Exact locality unknown (Fischer-Piette, 1975).
- 382 *Globivenus magdalenae* (Dall, 1902). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 110 m (F. & L. Poorman, 1988).

#### Subfamily CIRCINAE

Genus *Gouldia* C. B. Adams, 1847

Subgenus *Gouldia*, s. s.

- 383 *Gouldia* (*G.*) *californica* Dall, 1917. Extend distribution south to Ecuador (Abbott, 1974). Bernard (1983) includes the Islas Galápagos, Ecuador, but gives the distribution as 8°N-26°N. Distribution to the Islas Galápagos, Ecuador, confirmed (Finet, 1985).

#### Subfamily MERETRICINAE

Genus *Tivela* Link 1807

Subgenus *Tivela*, s. s.

- 384 *Tivela* (*T.*) *argentina* (Sowerby, 1835). Extend distribution south to Tumbes, Peru (Peña, 1971). Extend distribution to western side of the Gulf of California at San Felipe, Baja California, Mexico (Gemmell, Hertz & Myers, 1980). Distribution: 2°S-31°N (Bernard, 1983a). Length: 62.2 mm (Wagner & Abbott, 1990).
- 385 *Tivela* (*T.*) *byronensis* (Gray, 1838). Extend distribution south to Tumbes, Peru (Peña,

1971). Depth to 90 m (Cruz-P., 1977). Add synonyms: *Tivela elegans* Verrill, 1870; *Mactra calbucana* Philippi, 1893; *M. coquimbana* Philippi, 1893. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 61.3 mm (Draper, 1987).

- 386 *Tivela* (*T.*) *delessertii* (Sowerby, 1854). Add synonym: ?*Tivela marginata* "Carpenter" Berry, 1907 (Bernard, 1983a). Delete ?*Tivela marginata* "Carpenter" Berry, 1907, as a synonym (Coan, 1984b).

#### Subgenus *Pachydesma* Conrad, 1854

- *Tivela* (*P.*) *stultorum* Mawe, 1854. Synonym: *Cytherea* (*Trigoella*) *crassatelloides* Conrad, 1837. Length: 187 mm. Distribution: Marin County, California, to Bahía Magdalena, Baja California Sur, Mexico. Depth: intertidal zone to 24 m (Hertlein & Grant, 1972). Synonyms: *C. solidissima* Philippi, 1851; *C. (Tivela) crassatelloides pauciradiata*, *C. c. multiradiata*, *C. c. alternata*, *C. c. eccentrica*, *C. c. serialis*, *C. c. interrupta*, *C. c. luteobrunnea*, *C. c. uniradiata*, *C. c. biradiata*, *C. c. triradiata*, *C. c. ochracea*, *C. c. purpureochocolata*, *C. c. biserialis*, *C. c. triserialis*, *C. c. aurora*, *C. c. duplicata*: all Stearns, 1899. Distribution: 25°N-37°N, intertidal zone to 5 m (Bernard, 1983a).

#### Subgenus *Planitivela* Olsson, 1961

- 389 *Tivela* (*P.*) *hians* (Philippi, 1851). Delete. Becomes a synonym of *Tivela lessonii* (Deshayes, 1830), which has a distribution (12°S-30°S) outside of the Panamic Province (Bernard, 1983a).
- 390 *Tivela* (*P.*) *planulata* (Broderip & Sowerby, 1830). Extend distribution south to Máncora, Peru (Peña, 1971). Length: 64.9 mm (Draper, 1989).

#### Genus *Transennella* Dall, 1884

Correct date from 1883 (Keen & Coan, 1975).

Subgenus *Transennella*, s. s.

- 391 *Transennella* (*T.*) *caryonautes* Berry, 1963. Depth: 20 to 150 m (Bernard, 1983a). Holotype figured (Hertz, 1984).
- 394 *Transennella* (*T.*) *modesta* (Sowerby, 1835).

Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Extend distribution across Gulf of California to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

Subfamily PITARINAE  
Genus *Pitar* Römer, 1857  
Subgenus *Pitar*, s. s.

- 397 *Pitar* (*P.*) *berryi* Keen, 1971. Distribution: 21°N-23°N. Depth: 15 to 40 m (Bernard, 1983a). Length: 51 mm (Draper, 1987). Extend distribution north to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).
- 398 *Pitar* (*P.*) *consanguineus* (C. B. Adams, 1852). Distribution: 1°S-16°N, including the Islas Galápagos, Ecuador (Bernard, 1983a). Include Isla Gorgona, Colombia, in distribution (von Prael, 1986).
- *Pitar* (*P.*) *newcombianus* (Gabb, 1865). Distribution: Monterey, California, to Punta Peñasco, Sonora, and south to Guatulco, Oaxaca; Isla Clarion, Mexico (Hertlein & Grant, 1972). Depth: 45 to 220 m (Bernard, 1983a).
- 401 *Pitar* (*P.*) *helenae* Olsson, 1961. Extend distribution south to the Islas Galápagos, Ecuador (Finet, 1985). Include Isla Gorgona, Colombia, in distribution (von Prael, 1986).
- 403 *Pitar* (*P.*) *perfragilis* Pilsbry & Lowe, 1932. Length: 11.4 mm. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 100 m (F. & L. Poorman, 1988). Extend distribution north to Isla Smith, Bahía de los Angeles, Baja California, Mexico. Depth: 14 to 183 m (Skoglund, 1988). Extend distribution south to Bahía Cocos, Costa Rica (Skoglund, 1990a).

Subgenus *Hyphantosoma* Dall, 1902

- 405 *Pitar* (*H.*) *hertleini* Olsson, 1961. Length: 48 mm (Draper, 1987). Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 406 *Pitar* (*H.*) *pollicaris* (Carpenter, 1864).

Distribution: 26°N-29°N. Depth: intertidal zone to 15 m (Bernard, 1983a). Length: 86.4 mm (Draper, 1987). Depth: 20 m (F. & L. Poorman, 1988).

Subgenus *Hysteroconcha* Dall, 1902  
Juvenile spine development (Skoglund, 1976).

- 408 *Pitar* (*H.*) *lupanaria* (Lesson, 1830). Length: 96.5 mm (Wagner & Abbott, 1990).
- 409 *Pitar* (*H.*) *multispinosus* (Sowerby, 1851). Length: 51.4 mm (Draper, 1987).
- 410 *Pitar* (*H.*) *roseus* (Broderip & Sowerby, 1829). Extend distribution south to Peru (Abbott, 1974). Confirm distribution to Esmeraldas Province, Ecuador (Baldazzi, Di Cecco & Tiberi, 1986). Length: 53.4 mm (Draper, 1987). Correct synonym to read: *Cytherea lepida* Chenu, *auctt., non* Chenu, 1847 (Coan, pers. comm., 1990).

Subgenus *Lamelliconcha* Dall, 1902

- 411 *Pitar* (*L.*) *alternatus* (Broderip, 1835). Add synonym: *Dione pura* Deshayes, 1853 (Bernard, 1983a).
- 412 *Pitar* (*L.*) *callicomatus* (Dall, 1902). Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 413 *Pitar* (*L.*) *concinus* (Sowerby, 1835). Length: 45.8 mm (Draper, 1987).
- 414 *Pitar* (*L.*) *frizzelli* Hertlein & Strong, 1948. Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 35 to 100 m (F. & L. Poorman, 1988).
- 415 *Pitar* (*L.*) *hesperius* Berry, 1960. Holotype figured (Hertz, 1984). Length: 48.2 mm (Draper, 1987).
- 416 *Pitar* (*L.*) *paytensis* Orbigny, 1845. Depth: 91 m (Cruz-P., 1977). Add synonym: *Pitar* (*L.*) *salanga* Pilsbry & Olsson, 1941 (Bernard, 1983a).
- 417 *Pitar* (*L.*) *tortuosus* (Broderip, 1835). Extend distribution south to Tumbes, Peru (Peña, 1971). Distribution: 3°S-28°N (Bernard, 1983a).
- 418 *Pitar* (*L.*) *unicolor* (Sowerby, 1835). Extend distribution north to the Gulf of California, Mexico (Abbott, 1974). Length: 58.4 mm (Draper, 1987). Distribution confirmed to Nayarit, Mexico (Reguero & García-Cubas, 1989).

- 419 *Pitar* (*L.*) *vinaceus* (Olsson, 1961). Length: 34.8 mm (Draper, 1987).

Subgenus *Pitarella* Palmer, 1927

- 420 *Pitar* (*P.*) *aequinoctialis* (Fischer-Piette, 1969). Extend distribution north to Esmeraldas, Ecuador. Depth: 47 to 90 m (Cruz-P., 1977).  
 421 *Pitar* (*P.*) *catharius* (Dall, 1902). Depth: 35 to 100 m (F. & L. Poorman, 1988).  
 422 *Pitar* (*P.*) *mexicanus* Hertlein & Strong, 1948. Extend distribution south to Ecuador (Abbott, 1974). Distribution: 9°N-31°N (Bernard, 1983a). Length: 59.2 mm (Draper, 1987).

Subgenus *Tinctora* Jukes-Brown, 1914

- 423 *Pitar* (*T.*) *vulneratus* (Broderip, 1835). Length: 51.9 mm (Draper, 1987).

Genus *Amiantis* Carpenter, 1864

- *Amiantis callosa* (Conrad, 1837). Synonyms: *Cytherea nobilis* Reeve, 1850; *Pitaria stalderi* Clark, 1915; *Antigona willisi* Trask, 1922. Distribution: 23°N-35°N. Depth: 1 to 20 m (Bernard, 1983a). Length: 120.7 mm (Draper, 1987).

Genus *Megapitaria* Grant & Gale, 1931

- 424 *Megapitaria aurantiaca* (Sowerby, 1831). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 129.7 mm (Wagner & Abbott, 1990).  
 425 *Megapitaria squalida* (Sowerby, 1835). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Depth to 35 m (F. & L. Poorman, 1988). Length: 122 mm (Wagner & Abbott, 1990).

Subfamily DOSINIINAE

Genus *Dosinia* Gray, 1835

Subgenus *Dosinia*, s. s.

- 426 *Dosinia* (*D.*) *dunkeri* (Philippi, 1844). Add synonym: *Cytherea* (*Artemis*) *angulosa* Philippi, 1847. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Depth to 100 m (F. & L. Poorman, 1988).

- 427 *Dosinia* (*D.*) *ponderosa* (Schumacher, 1817). Add synonyms: *Artemis distans* Sowerby, 1851; *Dosinia grandis* Nelson, 1870; ?*D. (Dosinidia) titan* Maury, 1925. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 156.5 mm (Draper, 1987).  
 428 *Dosinia* (*D.*) *semiobliterata* Deshayes, 1853. Add synonym: *Artemis nanus* Reeve, 1850 (Bernard, 1983a). Length: 73.7 mm (Draper, 1987).

Subfamily CYCLININAE

Genus *Cyclinella* Dall, 1902

- 429 *Cyclinella jadisi* Olsson, 1961. Length: 50.9 mm (Draper, 1987). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 35 m (F. & L. Poorman, 1988).  
 431 *Cyclinella saccata* (Gould, 1851). Length: 68.4 mm (Draper, 1987).  
 432 *Cyclinella singleyi* Dall, 1902. Extend distribution south to Tumbes, Peru (Peña, 1971). Synonym: *Cyclinella galera* Pilsbry & Olsson, 1941 (Bernard, 1983a).  
 433 *Cyclinella subquadrata* (Hanley, 1845). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).

Subfamily CLEMENTINIINAE

Genus *Clementia* Gray, 1842

Subgenus *Egesta* Conrad, 1845

- 435 *Clementia* (*E.*) *solida* Dall, 1902. Subgenus changed from *Clementia*, s. s. (Bernard, 1983a). Length: 71.9 mm (Wagner & Abbott, 1990).

Subgenus *Clementia* s. l.

- 436 *Clementia gracillima* Carpenter, 1857. Delete. *Nom. dub.* (Bernard, 1983a).

Genus *Compsomyx* Stewart, 1930

- 437 *Compsomyx subdiaphana* (Carpenter, 1864). Synonyms: *Saxidomus gibbosus* Gabb, 1869; *Callista subdiaphana pedroana* Arnold, 1903; *Clementia obliqua* Jukes-Brown, 1913 (Bernard, 1983a). Length: 84 mm (Wagner & Abbott, 1990).

## Subfamily TAPETINAE

Genus *Eurhomalea* Crossmann, 1920

- *Eurhomalea decussata* (Deshayes, 1853).  
Distribution: 4°S-13°S. Intertidal zone  
(Bernard, 1983a).

Genus *Irus* Schmidt, 1818Subgenus *Paphonotia* Hertlein & Strong, 1948

- 438 *Irus* (*P.*) *ellipticus* (Sowerby, 1834). Add  
synonyms: ?*Petricola discors* Sowerby, 1834;  
*Venerupis fimbriata* Sowerby, 1855. Correct  
author date on synonym *Petricola oblonga* to  
Sowerby, 1834, and of *P. solidula* to Sowerby,  
1855 (Bernard, 1983a).

## Subfamily CHIONINAE

Genus *Chione* Megerle, 1811Subgenus *Chione*, s. s.

- 440 *Chione* (*C.*) *californiensis* (Broderip, 1835). As  
a synonym of *Chione undatella* (Sowerby, 1835)  
[445] by Fischer-Piette & Vukadinovic (1977).  
Distribution: Goleta, California, to Peru  
(McLean, 1978). Reinstate as a valid species.  
Add synonyms: *Venus brevilineata* Conrad, 1849;  
*V. lamellifera* Conrad, 1849; *Chione* (*C.*)  
*californiensis peabodyi* Parker, 1949.  
Distribution restricted 17°N-34°N (Bernard,  
1983a). Length: 76.4 mm (Draper, 1987).  
441 *Chione* (*C.*) *compta* (Broderip, 1835).  
Synonym: *Venus neglecta* Gray, 1839, non  
Sowerby, 1839. Include the Islas Galápagos,  
Ecuador, in distribution. Depth: 20 to 30 m  
(Bernard, 1983a). Length: 45.7 mm (Draper,  
1987).  
442 *Chione* (*C.*) *guatulcoensis* Hertlein & Strong,  
1948. Extend distribution north to La Paz,  
Baja California Sur, Mexico. Intertidal zone  
(Hertz & Hertz, 1984). Length: 14.8 mm  
(Draper, 1987).  
443 *Chione* (*C.*) *subimbricata* (Sowerby, 1835).  
Synonym: *Chione tumens* (Verrill, 1870) [444]  
(Fischer-Piette & Vukadinovic, 1977). Delete  
*Chione tumens* as a synonym (Bernard, 1983a).  
Length: 42.4 mm (Draper, 1987).  
444 *Chione* (?*C.*) *tumens* (Verrill, 1870). Delete.  
A synonym of *Chione subimbricata* (Sowerby,  
1835) [443] (Fischer-Piette & Vukadinovic,  
1977). Is a valid species. Depth: intertidal

zone to 10 m (Bernard, 1983a). Length: 44.5  
mm (Draper, 1987).

- 445 *Chione* (*C.*) *undatella* (Sowerby, 1835).  
Synonym: *Chione californiensis* (Broderip, 1835)  
[440] (Fischer-Piette & Vukadinovic, 1977).  
Distribution: Goleta, California, to Peru  
(McLean, 1978). Anatomy figured (Jones,  
1979). Delete *Chione californiensis* as a  
synonym. Add synonym: *Venus californiana*  
Conrad, 1837 (Bernard, 1983a). Include the  
Islas Galápagos, Ecuador, in distribution  
(Finet, 1985). Length: 61.4 mm (Wagner &  
Abbott, 1990).

Subgenus *Chionista* Keen, 1958

- 446 *Chione* (*C.*) *cortezi* (Carpenter, 1864, ex Sloat  
MS). Length: 88.5 mm (Draper, 1987).  
447 *Chione* (*C.*) *fluctifraga* (Sowerby, 1853). Hinge  
figured (Fischer-Piette & Vukadinovic, 1977).  
Distribution: Mugu Lagoon, California, to the  
Gulf of California, Mexico (McLean, 1978).  
Synonym: *Venus sugillata* Reeve, 1863 (Bernard,  
1983a). Extend distribution south to Laguna  
de Agiabampo, Sonora/Sinaloa, Mexico  
(García-Cubas & Reguero, 1987). Length: 86  
mm (Wagner & Abbott, 1990).

Subgenus *Iliochione* Olsson, 1961

- *Chione* (*I.*) *broggi* (Pilsbry & Olsson, 1943).  
Distribution: 4°S-33°S. Depth: intertidal zone  
to 5 m (Bernard, 1983a).  
457 *Chione* (*I.*) *subrugosa* (Wood, 1828). Hinge  
figured. Synonyms: *Venus triradiata* Anton,  
1839; *Anomalocardia broggi* Pilsbry & Olsson,  
1943 (Fischer-Piette & Vukadinovic, 1977).  
Delete *Anomalocardia broggi* as a synonym.  
Include the Islas Galápagos, Ecuador, in  
distribution (Bernard, 1983a).

Subgenus *Liriphora* Conrad, 1863

- 459 *Chione* (*L.*) *kelleitii* (Hinds, 1845). Length: 75  
mm (Wagner & Abbott, 1990).  
460 *Chione* (*L.*) *mariae* (Orbigny, 1846). Include  
the Islas Galápagos, Ecuador, in distribution  
(Bernard, 1983a).  
461 *Chione* (*L.*) *obliterata* Dall, 1902. Distribution:  
9°N-19°N (Bernard, 1983a). Extend  
distribution north to Yavaros, Sonora, Mexico

(García-Cubas & Reguero, 1987).

Genus *Chionopsis* Olsson, 1932

Raised to genus (Fischer-Piette & Vukadinovic, 1977).

- 448 *Chionopsis amathusia* (Philippi, 1844). Add synonym: *Chione variabilis* Nelson, 1870. Delete ?*Venus darwinii* Dunker, in Römer, 1857, as a synonym (Bernard, 1983a). Length: 65.4 mm (Draper, 1987).
- 449 *Chionopsis crenifera* (Sowerby, 1835). As a synonym of *Nioche subrostrata* Lamark, 1818 (Fischer-Piette & Vukadinovic, 1977). Is a valid species. Synonym: *Venus eximia* Philippi, 1847, non Forbes, 1846 (Bernard, 1983a).
- 450 *Chionopsis gnidia* (Broderip & Sowerby, 1829). Synonyms: *Venus amathusia* Philippi, 1844 [448]; *Venus darwinii* Römer, 1858, ex Dunker MS; *Chione jamaniana* Pilsbry & Olsson, 1941 [451] (Fischer-Piette & Vukadinovic, 1977). Delete as synonyms: *Venus amathusia* and *Chione jamaniana* (Bernard, 1983a). Length: 116.7 mm (Wagner & Abbott, 1990).
- 451 *Chionopsis jamaniana* (Pilsbry & Olsson, 1941). Distribution: 0°-5°S (Bernard, 1983a).
- 452 *Chionopsis montezuma* (Pilsbry & Lowe, 1932).
- 453 *Chionopsis olssoni* (Fischer-Piette, 1969). Delete. Becomes a synonym of *Chionopsis purpurissata* (Dall, 1902) [456] (Fischer-Piette & Vukadinovic, 1977).
- 454 *Chionopsis ornatissima* (Broderip, 1835). Depth: 51 m (Cruz-P., 1977).
- 455 *Chionopsis pulicaria* (Broderip, 1835). Synonym: *Chione montezuma* Pilsbry & Lowe, 1932 [452] (Fischer-Piette & Vukadinovic, 1977). Delete *Chione montezuma* as a synonym. Add synonym: *Venus pinacatensis* Carpenter, 1864, ex Sloat MS (Bernard, 1983a). Length: 57.1 mm (Wagner & Abbott, 1990).
- 456 *Chionopsis purpurissata* (Dall, 1902). As *Chionopsis (Puberella) pubera* (Bory de St. Vincent, 1827) with synonym *Chionopsis olssoni* Fischer-Piette, 1968 [453] (Fischer-Piette & Vukadinovic, 1977). As *Chione purpurissata* (Bernard, 1983a). Depth: 80 m (F. & L. Poorman, 1988). Extend distribution south to Bahía Cocos, Costa Rica (Skoglund, 1990a). Extend distribution south to Guayas, Ecuador (Skoglund, 1990b).

Genus *Timoclea* Brown, 1827

Raised from subgenus (Fischer-Piette & Vukadinovic, 1977)

- *Timoclea picta* (Willett, 1944). Distribution: 17°N-29°N, intertidal zone to 50 m (Bernard, 1983a). Delete. Becomes a synonym of *Chione (T.) squamosa* (Carpenter, 1857) [463] (Gemmell, Myers & Hertz, 1987).
- 463 *Timoclea squamosa* (Carpenter, 1857). *T. squamosa* regarded as a synonym of *T. troglodytes* Mörch, 1861, by Fischer-Piette & Vukadinovic (1977). A valid species. Depth: 10 to 50 m (Bernard, 1983a). Synonym: *Chione picta* Willett, 1944. Distribution confirmed to San Felipe, Baja California, Mexico, intertidal zone. Length: 15mm (Gemmell, Myers & Hertz, 1987).

Genus *Mercenaria* Schumacher, 1817

- 464 *Mercenaria apodema* (Dall, 1902). Delete. Probably a ballast shell referable to an Atlantic species (Bernard, 1983a).

Genus *Protothaca* Dall, 1902

Subgenus *Protothaca*, s. s.

- *Protothaca (P.) staminea* (Conrad, 1837). Synonyms: *Venerupis petittii* Deshayes, 1839; *Tapes ruderata* Deshayes, 1853; *Tapes staminea orbella* Carpenter, 1864; *Protothaca staminea spatiosa* Dall, 1916. Distribution: Aleutian Islands to Cabo San Lucas, Baja California Sur, Mexico. Depth: shore to 46 m (Hertlein & Grant, 1972). Synonyms: *Venus pectunculoides* Valenciennes, 1846; *Tapes diversa* Sowerby, 1855; *Venus dispar* Carpenter, 1857; *V. ampliata* Carpenter, 1857; *V. mundulus* Reeve, 1863; *Leukoma conradi* Römer, 1867; *Paphia (Protothaca) staminea sulculosa*, Dall, 1902; *Protothaca grewingkii* Dall, 1904. Distribution: 23°N-60°N, intertidal zone to 10 m (Bernard, 1983a).

Subgenus *Antinioche* Olsson, 1961

- 465 *Protothaca (A.) beili* (Olsson, 1961). As *Nioche* by Fischer-Piette & Vukadinovic (1977), and *Protothaca* by Bernard (1983a). Extend

distribution north to the Gulf of Fonseca, El Salvador (Hernández, 1979).

Subgenus *Colonche* Olsson, 1961

- 466 *Protothaca* (C.) *ecuadoriana* (Olsson, 1961). As *Nioche* by Fischer-Piette & Vukadinovic (1977), and *Protothaca* by Bernard (1983a).

Subgenus *Leukoma* Römer, 1857

- 467 *Protothaca* (L.) *asperrima* (Sowerby, 1835). Placed in genus *Nioche* as a synonym of *Nioche cardilla* Lamarck, 1818 (Fischer-Piette & Vukadinovic, 1977). A valid species. Delete *Tapes tumida* Sowerby, 1853, as a synonym. Include the Islas Galápagos, Ecuador in distribution (Bernard, 1983a). Length: 63.9 mm (Draper, 1987). Correct date on synonym *Venus intersecta* to Sowerby, 1853 (Coan, pers. comm., 1990).
- 468 *Protothaca* (L.) *macgintyi* (Olsson, 1961). As *Nioche* by Fischer-Piette & Vukadinovic (1977). As *Protothaca*. Change spelling from *mcgintyi* (Bernard, 1983a).
- 469 *Protothaca* (L.) *metodon* (Pilsbry & Lowe, 1932). Placed in genus *Nioche* by Fischer-Piette & Vukadinovic (1977), and *Protothaca* by Bernard (1983a). Length: 46.4 mm (Draper, 1987).
- 470 *Protothaca* (L.) *subaequilateralis* (Fischer-Piette, 1969). Placed in *Nioche* by Fischer-Piette & Vukadinovic (1977), and *Protothaca* by Bernard (1983a).
- 471 *Protothaca* (L.) *zorritensis* (Olsson, 1961). Hinge figured. Placed in genus *Nioche* by Fischer-Piette & Vukadinovic (1977). As *Protothaca*. Include the Islas Galápagos in distribution (Bernard, 1983a).

Subgenus *Notochione* Hertlein & Strong, 1948

- 472 *Protothaca* (N.) *columbiensis* (Sowerby, 1835). Extend distribution north to Laguna de Topolobampo, Sinaloa, Mexico (García-Cubas & Reguero, 1987). Length: 59.6 mm (Draper, 1987).

Subgenus *Tropithaca* Olsson, 1961

- 473 *Protothaca* (T.) *grata* (Say, 1831). Hinge

figured (Fischer-Piette & Vukadinovic, 1977). Synonym: *Venus neglecta* Philippi, 1844, non Sowerby, 1839. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 49.5 mm (Draper, 1987).

Family PETRICOLIDAE

Genus *Petricola* Lamarck, 1801

Subgenus *Petricola*, s. s.

- 476 *Petricola* (P.) *exarata* (Carpenter, 1857). Extend distribution south to Máncora, Peru (Peña, 1971). Add synonyms: *Petricola anachoreta* Folin, 1867; *Cypricardia noemi* Folin, 1867 (Bernard, 1983a).
- 477 *Petricola* (P.) *lucasana* Hertlein & Strong, 1948. Extend distribution south to Nicaragua (Montoya, López & López, 1987). Length: 50.3 mm (Draper, 1987).

Subgenus *Petricolaria* Stoliczka, 1870

- *Petricola* (P.) *amygdalina* Sowerby, 1834. Distribution: 3°S-2°N, including the Islas Galápagos, Ecuador. Depth: intertidal zone to 10 m (Bernard, 1983a).
- 478 *Petricola* (P.) *cognata* C.B. Adams, 1852. Extend distribution north to Laguna de Topolobampo, Sinaloa, Mexico (García-Cubas & Reguero, 1987).
- 480 *Petricola* (P.) *gracilis* Deshayes, 1853. Synonym: *Petricola gracilis parallela* Pilsbry & Lowe, 1932 (Bernard, 1983a). Extend distribution south to Los Santos Province, Panama (García & Pelesca, 1984). Length: 74.1 mm (Draper, 1987). Extend distribution south to Guayas, Ecuador (Skoglund, 1990b).

Genus *Rupellaria* Fleuriat de Bellevue, 1802

Raised to genus (Abbott, 1974) (Woodring, 1982).

- *Rupellaria carditoides* (Conrad, 1837). Length: 40 mm. Depth: intertidal zone to offshore. Distribution: Vancouver Island, British Columbia, Canada, to Bahía Magdalena, Baja California Sur, Mexico (McLean, 1978). Delete. Distribution (28°N-57°N) is north of the Panamic Province (Bernard, 1983a).
- 481 *Rupellaria denticulata* (Sowerby, 1834). Length: 34.2 mm (Draper, 1987).

- 482 *Rupellaria olssoni* Bernard, 1983. Synonym: *Petricola* (P.) *peruviana* Olsson, 1961, non *Venerupis peruviana* Jay, 1839 (Bernard, 1983a).  
 483 *Rupellaria typica* (Jonas, 1844). Synonyms: *Petricola robusta* Sowerby, 1834; *P. riocaensis* Maury, 1917. Distribution: both sides of Central America (Woodring, 1982). Add synonym: *Petricola venusta* Folin, 1867 (Bernard, 1983a). Length: 41.5 mm (Draper, 1987).

## Superfamily MACTRACEA

## Family MACTRIDAE

Genus *Mactra* Linnaeus, 1767Subgenus *Mactra*, s. s.

- 486 *Mactra* (M.) *williamsi* Berry, 1960. Distribution: 2°S-14°N (Bernard, 1983a). Holotype figured (Hertz, 1984).

Subgenus *Mactroderma* Dall, 1894

- 488 *Mactra* (M.) *velata* Philippi, 1849. Distribution: 1°S-19°N, including the Islas Galápagos, Ecuador (Bernard, 1983a). Length: 116 mm (Draper, 1987).

Subgenus *Mactrotoma* Dall, 1894

- 489 *Mactra* (M.) *dolabriformis* (Conrad, 1867). Delete here. Subgenus changed. See *Mactra* (*Simomactra*).  
 490 *Mactra* (M.) *nasuta* Gould, 1851. Distribution restricted to 6°N-34°N (Bernard, 1983a).

Subgenus *Micromactra* Dall, 1894

- 491 *Mactra* (M.) *angusta* Reeve, 1854. Extend distribution north to San Blas, Nayarit, Mexico. Length: 48.1 mm (Draper, 1987).  
 492 *Mactra* (M.) *californica* Conrad, 1837. Extend distribution south to Tumbes, Peru (Peña, 1971). Add synonym: *Mactra ovalina* Reeve, 1854 (Bernard, 1983a).  
 493 *Mactra* (M.) *fonsecana* Hertlein & Strong, 1950. Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985).  
 495 *Mactra* (M.) *vanatta* Pilsbry & Lowe, 1932. Extend distribution south to Paita, Piura Province, Peru (Peña, 1971).

Subgenus *Simomactra* Dall, 1894

- 489 *Mactra* (S.) *dolabriformis* (Conrad, 1867). "The type species of *Simomactra* Dall, 1894; doubtfully to be distinguished from *Mactrotoma* by having a smaller pallial sinus" (Keen & Coan, 1975). Length: 96.7 mm (Draper, 1987).  
 --- *Mactra* (S.) *hoffstetteri* Cauquoin, 1969. Distribution: 1°N (Bernard, 1983a).

Genus *Harvella* Gray, 1853

- 498 *Harvella elegans* (Sowerby, 1825). Add synonyms: *Mactra estrellana* Olsson, 1922; *Mactra sanctiblasii* Maury, 1925. Subspecies: *Harvella elegans tucilla* Olsson, 1932 (Woodring, 1982). Length: 76 mm (Draper, 1987).

Genus *Mactrellona* Marks, 1951

- 499 *Mactrellona carinata* (Lamarck, 1818). Extend range south to Tumbes, Peru (as *M. alata*) (Peña, 1971). Synonym: *Mactrellona alata* Spengler, auctt., non Spengler, 1802 (Bernard, 1983a).  
 501 *Mactrellona exoleta* (Gray, 1837). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 129.6 mm (Draper, 1987).

Genus *Mulinia* Gray, 1837

- 503 *Mulinia coloradoensis* Dall, 1894. Delete *Mulinia modesta* Dall, 1894, as synonym (Bernard, 1983a). Length: 63.4 mm (Draper, 1987).  
 504 *Mulinia pallida* (Broderip & Sowerby, 1829). Add synonyms: *Mulinia densata* Conrad, 1856; *Mactra carinulata* Reeve, 1854; *Mulinia modesta* Dall, 1894; *M. camina* Pilsbry & Olsson, 1941 (Bernard, 1983a).

Genus *Raeta* Gray, 1853

- 505 *Raeta undulata* (Gould, 1851). Extend distribution south to near Caleta Chipana, Chile (21°S) (Tomicic-K., 1978). Synonym: *Raeta gibbosa* Gabb, 1869 (Bernard, 1983a).

Genus *Rangia* DesMoulins, 1832

Subgenus *Rangianella* Conrad, 1863

- 506 *Rangia* (*R.*) *mendica* (Gould, 1851). Add synonym: *Gnathodon lecontei* Conrad, 1853 (Bernard, 1983a). Length: 36.4 mm (Draper, 1987).

Genus *Spisula* Gray, 1837

- *Spisula planulata* (Conrad, 1837). As subgenus *Mactromeris*. Distribution: Monterey Bay, California, to Cabo San Lucas, Baja California Sur, Mexico. Depth: intertidal zone to 91 m (Hertlein & Grant, 1972).

#### Superfamily TELLINACEA

In line 1 of the definition of the Tellinacea, delete "never with a chondrophore" and substitute, "never with any inverted V-shaped cardinal teeth" (Keen & Coan, 1975).

#### Family TELLINIDAE

Genus *Tellina* Linnaeus, 1758

Subgenus *Angulus* Megerle, 1811

- 508 *Tellina* (*A.*) *amianta* Dall, 1900. Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Holotype figured. Extend distribution to San Felipe, Baja California, Mexico. Shell and hinge figured (Hertz, Myers & Gemmell, 1984).
- 509 *Tellina* (*A.*) *carpenteri* Dall, 1900. Lectotype figured. Valve interiors figured. Add synonym: *Angulus variegatus* Carpenter, 1864, non *Tellina variegata* Gmelin, 1791. Depth: intertidal zone to 500 m (Coan, 1971).
- 512 *Tellina* (*A.*) *coani* Keen, 1971. Holotype figured. Interior of valves and hinge figured. Extend distribution to Playa Alicia, near San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1983). Depth: 30 m (F. & L. Poorman, 1988).
- 513 *Tellina* (*A.*) *felix* Hanley, 1844. Extend distribution north to Laguna de Guaymas, Sonora (García-Cubas & Reguero, 1987). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth to 90 m (F. & L. Poorman, 1988).
- 515 *Tellina* (*A.*) *hiberna* Hanley, 1844. Lectotype figured. Intertidal zone near San Felipe, Baja California, Mexico (Hertz, Myers & Gemmell,

1984).

- 517 *Tellina* (*A.*) *meropsis* Dall, 1900. Lectotype figured. Valve interiors figured. Add synonym: *Angulus gouldii* Carpenter, 1864, ex Hanley MS, non *Tellina gouldii* Hanley, 1846. Distribution: Pacific Grove, California; the west coast of Baja California; the Gulf of California, Mexico, and south to Santa Elena, Ecuador. Depth: intertidal zone to 48 m (Coan, 1971). Length: 15.1 mm (Draper, 1987).
- 518 *Tellina* (*A.*) *recurvata* Hertlein & Strong, 1949. Length: 27 mm (Draper, 1987).
- 522 *Tellina* (*A.*) *tumbezensis* (Olsson, 1961). Extend distribution north to Panama (Avilés-E., 1981).

Subgenus *Elliptotellina* Cossmann, 1888

- 523 *Tellina* (*E.*) *pacifica* Dall, 1900. Extend distribution south to the Islas Galápagos, Ecuador (Finet, 1985). Length: 18 mm (Draper, 1987). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 20 to 35 m (F. & L. Poorman, 1988).

Subgenus *Elpidollina* Olsson, 1961

- 524 *Tellina* (*E.*) *decumbens* Carpenter, 1865. Add synonym: *Angulus amplexans* Carpenter, 1864, nom. nud. (Bernard, 1983a).

Subgenus *Eurytellina* Fischer, 1887

- 525 *Tellina* (*E.*) *eburnea* Hanley, 1844. Add synonym: *Tellina* (*E.*) *eburnea askoyana* Hertlein & Strong, 1955 [526]. Distribution: 5°S-14°N (Bernard, 1983a). Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 526 *Tellina* (*E.*) *eburnea askoyana* Hertlein & Strong, 1955. Delete. Becomes synonym of *Tellina* (*E.*) *eburnea* [525] (Bernard, 1983a).
- 527 *Tellina* (*E.*) *ecuadoriana* Pilsbry & Olsson, 1941. Extend distribution south to Tumbes, Peru (Peña, 1971). Extend distribution north to the Gulf of Fonseca, El Salvador (Hernández, 1979).
- 528 *Tellina* (*E.*) *hertleini* (Olsson, 1961). Extend distribution south to Tumbes, Peru (Peña, 1971). Distribution: 3°S-13°N (Bernard, 1983a).

- *Tellina* (E.) *laplata* Pilsbry & Olsson, 1941. Length: 60 mm. Distribution: Paita and Bayovar, Peru (Olsson, 1961).
- 531 *Tellina* (E.) *mantaensis* Pilsbry & Olsson, 1943. Extend distribution north to Guaymas, Sonora, Mexico. Length: 26.2 mm (Draper, 1987).
- 532 *Tellina* (E.) *prora* Hanley, 1844. Extend distribution north to San Felipe, Baja California, Mexico. Valve interiors and hinge figured (Gemmell, Myers & Hertz, 1987).
- 535 *Tellina* (E.) *simulans* C.B. Adams, 1852. Valve interiors figured (Gemmell, Myers & Hertz, 1987). Length: 52.3 mm (Draper, 1987).

Subgenus *Hertellina* Olsson, 1961

- 536 *Tellina* (H.) *nicoyana* Hertlein & Strong, 1949. Distribution: 4°S-10°N (Bernard, 1983a).

Subgenus *Laciolina* Iredale, 1937

- 537 *Tellina* (L.) *ochracea* Carpenter, 1864. Extend distribution south to Bahía Cocos, Costa Rica (Skoglund, 1990a).

Subgenus *Lyratellina* Olsson, 1961

- 538 *Tellina* (L.) *lyra* Hanley, 1844. Extend distribution to Bahía San Carlos, Sonora, Mexico. Depth to 35 mm (F. & L. Poorman, 1988).

Subgenus *Merisca* Dall, 1900

- 540 *Tellina* (M.) *brevirostris* Deshayes, 1855. Lectotype figured. Delete *Merisca margarita* Olsson, 1961, as synonym. Distribution: south of Puertecitos, Baja California, throughout the Gulf of California, Mexico, to the Islas Galápagos, Ecuador (Myers, Gemmell & Hertz, 1983). Length: 25.2 mm (Draper, 1987).
- 541 *Tellina* (M.) *reclusa* Dall, 1900. Extend distribution into the Gulf of California at San Felipe, Baja California, Mexico. Lectotype figured. Synonym: *Merisca margarita* Olsson, 1961 (Myers, Gemmell & Hertz, 1983).
- 542 *Tellina* (M.) *crystallina* Spengler, 1798. Synonyms: *Tellina errati* Pilsbry & Johnson, 1917; *Merisca rhynchoscute* Olsson, 1961. Distribution: Panama to Ecuador; Western Atlantic (Woodring, 1982). Exterior and

details of hinge figured (as *T. rhynchoscute*) (Gemmell, Myers & Hertz, 1987). Length: 27 mm (Draper, 1987).

- 543 *Tellina* (M.) *ulloana* Hertlein, 1968. Hinge dentition figured. Extend distribution north to the San Felipe area, Baja California, Mexico (Gemmell, Hertz & Myers, 1980).

Subgenus *Peronidia* Dall, 1900

- *Tellina* (P.) *bodegensis* Hinds, 1845. Synonym: *Tellina* (*Peronidia*) *santarosae* Dall, 1900. Lectotype figured. Distribution: British Columbia, Canada, to Bahía Magdalena, Baja California Sur, Mexico. Gulf of California records probably in error. Depth: intertidal zone to 96 m (Coan, 1971). Synonym: ?*T. callamensis* Reagan, 1908 (Bernard, 1983a). Length: 62.4 mm (Draper, 1987).

Subgenus *Phyllodella* Hertlein & Strong, 1949

- 544 *Tellina* (P.) *insculpta* Hanley, 1844. Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).

Subgenus *Phyllodina* Dall, 1900

- 545 *Tellina* (P.) *fluctigera* Dall, 1908. Distribution: 4°S-8°N. Depth: 45 to 333 m (Bernard, 1983a).
- 546 *Tellina* (P.) *pristiphora* Dall, 1900. Distribution: 10°N-28°N (Bernard, 1983a).

Subgenus *Scissula* Dall, 1900

- 550 *Tellina* (S.) *virgo* Hanley, 1844. Valve interiors and details of hinge figured. Extend distribution to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).

Subgenus *Tellinella* Mörch, 1853, ex Gray MS

- 551 *Tellina* (T.) *cumingii* Hanley, 1844. Synonym: *Tellina argis* Olsson, 1971 [551a]. Distribution: 9°N-25°N (Bernard, 1983a). Include Isla Gorgona, Colombia, in distribution (von Prahl, 1986). Length: 65.5 mm (Draper, 1987).
- 551a *Tellina* (T.) *cumingii argis* Olsson, 1971. Known from a single valve taken at Isla Gorgona, Colombia, 91 to 101 m (Olsson,

1971). Delete. Becomes a synonym of *Tellina* (*T.*) *cumingii* Hanley, 1844 [551] (Bernard, 1983a).

- 552 *Tellina* (*T.*) *zacae* Hertlein & Strong, 1949. Distribution: 27°N-29°N (Bernard, 1983a).

Subgenus *Tellinidella* Hertlein & Strong, 1949

- 554 *Tellina* (*T.*) *princeps* Hanley, 1844. Correct Keen (1971) number from 544 (Keen & Coan, 1975). Length: 80.5 mm (Draper, 1987).

- 555 *Tellina* (*T.*) *purpurea* Broderip & Sowerby, 1829. Extend distribution south to Tumbes, Peru (Peña, 1971). Length: 65.9 mm (Draper, 1987).

Genus *Leporimetis* Iredale, 1930

Synonym: *Florimetis* Olsson & Harbison, 1953 (Coan, 1971).

- 556 *Leporimetis asthenodon* (Pilsbry & Olsson, 1932). Extend distribution south to Tumbes, Peru (Peña, 1971).

- 557 *Leporimetis cognata* (Pilsbry & Vanatta, 1902). Depth: 35 to 100 m (F. & L. Poorman, 1988).

- 558 *Leporimetis dombei* (Hanley, 1844). Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985).

- *Leporimetis obesa* (Deshayes, 1855). Lectotype figured. Interior of valves figured. Synonyms: *Tellina turgida* Deshayes, 1855; *T. alta* Conrad, 1837, *non* Conrad, 1833; *Scrobicularia biangulata* Carpenter, 1856. Distribution: Point Conception, California, to Bahía Magdalena, Baja California Sur, Mexico. Depth: intertidal zone to 46 m (Coan, 1971). Length: 112.3 mm (Wagner & Abbott, 1990).

Genus *Cymatoica* Dall, 1890

Raised from subgenus (Abbott, 1974).

- 559 *Cymatoica undulata* (Hanley, 1844). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Depth: 35 to 100 m (F. & L. Poorman, 1988).

Genus *Macoma* Leach, 1819

Subgenus *Psammacoma* Dall, 1900

- 561 *Macoma* (?*P.*) *carlottensis* (Whiteaves, 1880). Lectotype figured. Interior of valves figured. Distribution: Aleutian Islands, Alaska, to Islas Coronados, Baja California, and Isla Animas, Gulf of California, Mexico. Depth: 5 to 1547 m. Other records from Baja California Sur are in error (Coan, 1971).

- 562 *Macoma* (*P.*) *elytrum* Keen, 1958. Hinge dentition figured (Gemmell, Hertz & Myers, 1980). Lectotype of synonym *Tellina elongata* Hanley, 1844, figured. Interior of right valve of lectotype figured (Myers, Hertz & Gemmell, 1983a and 1983b). Length: 87.1 mm (Wagner & Abbott, 1990).

- 563 *Macoma* (*P.*) *grandis* (Hanley, 1844). Add Islas Galápagos, Ecuador, to distribution (Bernard, 1983a). Length: 85 mm (Draper, 1987).

- 564 *Macoma* (*P.*) *hesperus* Dall, 1908. Delete. Known only from the holotype, which is from the Caribbean (Bernard, 1983a).

- 565 *Macoma* (*P.*) *lamproleuca* (Pilsbry & Lowe, 1932). Length: 101.8 mm (Wagner & Abbott, 1990).

- *Macoma* (*P.*) *panamensis* Dall, 1900. Valid species. Holotype figured. Type locality Bahía de Panama. Keen (1971) lower fig. 566 is this species (Gemmell, Myers & Hertz, 1984).

- 567 *Macoma* (*P.*) *panamensis spectri* Hertlein & Strong, 1949. Synonym: *Macoma siliqua spectri* Hertlein & Strong, 1949. Holotype figured. Holotype dentition figured (Gemmell, Myers & Hertz, 1984). Depth: 35 to 100 m (F. & L. Poorman, 1988).

- 566 *Macoma* (*P.*) *siliqua* (C.B. Adams, 1852). Extend distribution south to Esmeraldas, Ecuador. Depth: 90 m (Cruz-P., 1977). Synonym: *Macoma* (*P.*) *siliqua spectri* Hertlein & Strong, 1949. Distribution: 9°N-31°N. Depth: 20 to 150 m (Bernard, 1983a). Holotype shell and hinge figured. Holotype of synonym *Thracia carnea* Mörch, 1860, figured. Delete synonyms *Macoma panamensis* Dall, 1900, and *M. siliqua spectri* Hertlein & Strong, 1949. Keen (1971) fig. 566, lower, is *Macoma panamensis* Dall, 1900. Distribution: San Felipe, Baja California, Mexico, to Panama (Gemmell, Myers & Hertz, 1984). Length: 35.2 mm (Draper, 1987).

Subgenus *Rexithaerus*  
Tryon, 1869, ex Conrad MS

- 568 *Macoma* (R.) *indentata* Carpenter, 1864. Lectotype figured. Valve interiors figured. Synonyms: *Macoma* (R.) *indentata tenuirostris* Dall, 1900; *M. (R.) rickettsi* Steinbeck & Ricketts, 1941, ex Rehder MS, *nom. nud.* Distribution: Trinidad, California, to and through the Gulf of California as far south as Isla Cerralvo, Baja California Sur; Guaymas, Sonora, Mexico. Depth: intertidal zone to 91 m (Coan, 1971). Length: 93.2 mm (Wagner & Abbott, 1990).
- *Macoma* (R.) *secta* (Conrad, 1837). Synonyms: *Tellina ligamentina* Deshayes, 1843; *Macoma secta edulis* Carpenter, 1860, ex Nuttall MS. Holotype and valve interiors figured. Length: 120 mm. Distribution: Vancouver Island, British Columbia, Canada, to Bahía Magdalena, Baja California Sur, Mexico. Depth: intertidal zone to 46 m. Specimens in collections from Acapulco and Oaxaca probably represent labeling errors (Coan, 1971). Extend distribution into the Gulf of California at Bahía San Carlos, Sonora, Mexico. Depth: 80 m (F. & L. Poorman, 1988).

Genus *Psammotreta* Dall, 1900  
Subgenus *Psammotreta*, s. s.

- 569 *Psammotreta* (P.) *aurora* (Hanley, 1844). Add synonym: *Tellina concinna* Philippi, 1844. Extend distribution to the Islas Galápagos, Ecuador (Bernard, 1983a). Length: 40 mm (Draper, 1987).
- 570 *Psammotreta* (P.) *mazatlanica* (Deshayes, 1855). Length: 42.5 mm (Draper, 1987). Extend distribution north to Isla Smith, Bahía de los Angeles, Baja California, Mexico. Depth: 183 m (Skoglund, 1988).
- 572 *Psammotreta* (P.) *viridotincta* (Carpenter, 1856). Synonym: *Tellina casta* Hanley, 1844 (Bernard, 1983a). Length: 79.3 mm (Wagner & Abbott, 1990).

Subgenus *Ardeamya* Olsson, 1961

- 573 *Psammotreta* (A.) *columbiensis* (Hanley, 1844). Extend distribution south to Tumbes, Peru (Peña, 1971).

Genus *Strigilla* Turton, 1822  
Subgenus *Strigilla*, s. s.

- 575 *Strigilla* (S.) *cicercula* (Philippi, 1846). Synonym: *S. interrupta* Mörch, 1860 [579]. Depth: 90 m (Cruz-P., 1977). Delete *S. interrupta* as a synonym (Bernard, 1983a). Length: 11.7 mm (Draper, 1987).
- 576 *Strigilla* (S.) *dichotoma* (Philippi, 1846). Depth: 51 m (Cruz-P., 1977). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).
- 577 *Strigilla* (S.) *disjuncta* (Carpenter, 1856). Extend distribution north to the Gulf of Fonseca, El Salvador (Hernández, 1979).

Subgenus *Pisostrigilla* Olsson, 1961

- 579 *Strigilla* (P.) *interrupta* Mörch, 1860. Regarded as a synonym of *Strigilla cicercula* (Philippi, 1846) [575] (Cruz-P., 1977), and as a valid species by Bernard (1983a).

Subgenus *Simplistrigilla* Olsson, 1961

- 580 *Strigilla* (S.) *serrata* Mörch, 1860. Extend distribution north to Cabo Tepoca, Sonora, Mexico (Skoglund, 1974). Distribution: northern end of the Gulf of California, Mexico, south to Ecuador (Keen & Coan, 1975).

Genus *Temnoconcha* Dall, 1921

- 582 *Temnoconcha cognata* (C.B. Adams, 1852). Length: 48.1 mm (Draper, 1987). Extend distribution south to Guayas, Ecuador (Skoglund, 1990b).

Family DONACIDAE  
Classification follows Coan (1983a).  
Genus *Donax* Linnaeus, 1758

- 583 *Donax asper* Hanley, 1845. Lectotype figured. Synonyms: *Donax granifera* Reeve, 1854, ex Deshayes MS; *D. rostratus* C.B. Adams, *auctt.*, non C.B. Adams, 1852. Length: 42 mm. Distribution: Gulf of Fonseca, El Salvador, to Tumbes Province, Peru. Intertidal on sand beaches (Coan, 1983a).
- *Donax assimilis* Hanley, 1845. Lectotype figured. Synonyms: *Donax panamensis* Philippi,

1849 [596]; *D. cayennensis* Lamarck, *auctt.*, *non D. caianensis* Lamarck, 1818; *D. curtus* Sowerby, 1866; *D. reevei* Bertin, 1881. Length: 44 mm. Distribution: Gulf of Fonseca, El Salvador, to the Gulf of Guayaquil, Ecuador. Intertidal zone in sand (Coan, 1983a).

588 *Donax dentifer* Hanley, 1843. Extend distribution north to the Gulf of Fonseca, El Salvador (Hernández, 1979). Lectotype figured. Delete ?*Donax assimilis* Hanley, 1845, as synonym. Length: 48 mm. Distribution: Guatemala to Guayas Province, Ecuador, intertidal zone in sand (Coan, 1983a). Extend distribution north to Tapachula, Chiapas, Mexico (Coan, 1985).

596 *Donax panamensis* Philippi, 1849. Delete. Becomes a synonym of *Donax assimilis* Hanley, 1845 (Coan, 1983a).

#### Subgenus *Chion* Scopoli, 1777

--- *Donax (C.) caelatus caelatus* Carpenter, 1857. Lectotype figured. Synonym: *Donax punctatostriatus* "var." *caelatus* Carpenter, 1857. Length: 49 mm. Distribution: Bahía de las Animas, Baja California; Guaymas, Sonora, Mexico, to Golfito, Costa Rica. Depth: intertidal zone to 3 m (Coan, 1983a). Extend distribution south to Panama (Coan, 1985).

--- *Donax (C.) caelatus rothi* Coan, 1983. Length: 22 mm. Distribution: Canoa, Manabí Province, Ecuador, to Punta Sal, Piura Province, Peru. Depth: intertidal zone to 3 m (Coan, 1983a).

586 *Donax (C.) contusus* Reeve, 1854. Delete. Becomes synonym of *Donax culter* Hanley, 1845 [587] (Coan, 1983a).

587 *Donax (C.) culter* Hanley, 1845. Lectotype figured. Synonyms: *Donax contusus* Reeve, 1854 [586]; *D. conradi* Reeve, 1854; *D. bitinctus* Reeve, 1855; *D. californicus* Conrad, *auctt.*, *non* Conrad, 1837. Delete as synonyms: *D. petallina* Reeve, 1854; *D. petalina* Deshayes, 1855 [in part]; *Amphichaena gracilis* Mörch, 1860. Length: 47 mm. Distribution: Isla San Ignacio, Sonora, and La Paz, Baja California Sur, to Acapulco, Guerrero, Mexico. Depth: intertidal zone to 2 m (Coan, 1983a).

589 *Donax (C.) ecuadorianus* Olsson, 1961. Holotype figured. Length: 22 mm. Extend distribution north to Gulf of Fonseca, El

Salvador. Intertidal zone to 1 m (Coan, 1983a).

582 *Donax (C.) mancorensis* Olsson, 1961. Delete. Becomes synonym of *Donax obesulus* Reeve, 1854 [594] (Coan, 1983a).

594 *Donax (C.) obesulus* Reeve, 1854. Lectotype figured. Synonyms: *Donax peruvianus* Deshayes, 1855; *D. radiatus* Valenciennes, 1827; *D. aricanus* Dall, 1909; *D. mancorensis* Olsson, 1961 [592]; *D. punctatostriatus* Hanley, *auctt.*, *non* Hanley, 1843. Delete as synonyms: ?*Donax granifera* Reeve, 1854; *D. curtus* Sowerby, 1866. Length: 38 mm. Distribution: Canoa, Manabí Province, Ecuador, to Bahía Moreno, Antofagasta Province, Chile (Coan, 1983a).

595 *Donax (C.) obesulus* Orbigny, 1845. Holotype figured. Synonym: *Donax obesulus* Reeve, *auctt.*, *non* Reeve, 1854. Length: 15.2 mm. Distribution: Gulf of Fonseca, El Salvador, to Manabí Province, Ecuador (Coan, 1983a).

598 *Donax (C.) punctatostriatus* Hanley, 1843. Lectotype figured. Synonym: *Donax sowerbyi* Bertin, 1881. Delete as synonym: *D. caelatus* Carpenter, 1857. Length: 48 mm. Distribution: Isla Cedros; Laguna San Ignacio, Baja California Sur, and throughout the Gulf of California, to Manzanillo, Colima, Mexico. Intertidal zone to about 5 m (Coan, 1983a).

#### Subgenus *Machaerodonax* Römer, 1870

585 *Donax (M.) carinatus* Hanley, 1843. Holotype figured. Length: 52 mm. Distribution: Bahía Magdalena, Baja California Sur, and Altata, Sinaloa, Mexico, to Tumbes Province, Peru. Intertidal zone to 12 m (Coan, 1983a).

599 *Donax (M.) transversus* Sowerby, 1825. Length: 42 mm. Distribution: Altata, Sinaloa, Mexico, to Piura Province, Peru. Intertidal zone in sand (Coan, 1983a). Length: 47.3 mm (Draper, 1987).

#### Subgenus *Amphichaena* Philippi, 1847

600 *Donax (A.) kindermanni* (Philippi, 1847). Extend distribution south to the Gulf of Fonseca, El Salvador (Hernández, 1979). Lectotype figured. Add synonym: *Amphichaena gracilis* Mörch, 1860. Length: 48 mm. Distribution: Bahía Tenacatita, Jalisco, Mexico,

to Gulf of Fonseca, El Salvador. Intertidal zone in sand (Coan, 1983a).

Subgenus *Paradonax*

Cossmann, in Cossmann & Peyrot, 1911

- 584 *Donax (P.) californicus* Conrad, 1837. Synonym: *Donax navicula* Hanley, 1845 [593]. Length: 33 mm. Distribution: Ventura County, California, to and throughout the Gulf of California, Mexico, and south to Tumbes Province, Peru. Intertidal zone to 10 m in fine sand (Coan, 1983a).
- 591 *Donax (P.) gracilis* Hanley, 1845. Lectotype figured. Length: 30.2 mm. Extend depth to 50 m (Coan, 1983a).
- 593 *Donax (P.) navicula* Hanley, 1845. Delete. Becomes synonym of *Donax californicus* Conrad, 1837 [584] (Coan, 1983a).

*Donax, s. l.*

- 590 *Donax gouldii* Dall, 1921. Holotype figured. Synonyms: *Donax obesus* Gould, 1851, *non* Orbigny, 1845; *Donax obesus* Philippi, 1851, *non* Orbigny, 1845; *D. laevigatus* Reeve, 1854, *ex* Deshayes MS; *D. abruptus* Carpenter, 1857, *ex* Gould MS, *nom. nud.* Length: 31.5 mm. Distribution: Marin County, California, to Arroyo Conejo, Baja California Sur; Isla Socorro, Islas Revillagigedo, Mexico. Intertidal zone to 5 m. Records from Mexican mainland are probably in error (Coan, 1983a).
- *Donax marincovichii* Coan, 1983. Synonyms: *Donax radiatus* Valenciennes, *auctt.*, in part, *non* Valenciennes, 1827; *D. peruvianus* Deshayes, *auctt.*, in part, *non* Deshayes, 1855. Length: 32 mm. Distribution: Salinas, Ecuador, to Tarapaca Province, Chile. Intertidal zone on sandy beaches (Coan, 1983a).

Genus *Iphigenia* Schumacher, 1817

- 601 *Iphigenia altior* (Sowerby, 1833). Lectotype figured. Length: 84 mm. Distribution: from Mazatlán, Sinaloa, Mexico, south. Not found in the Gulf of California. Depth: intertidal zone to 11 m (Coan, 1983a). Length: 87 mm (Draper, 1987).

Family PSAMMOBIIDAE

Subfamily PSAMMOBIINAE

Genus *Gari* Schumacher, 1817

Subgenus *Gobraeus* Brown, 1844, *ex* Leach MS  
As a genus (Hertlein & Grant, 1972).

- *Gari (G.) californica* (Conrad, 1849). Synonym: *Psammobia rubroradiata* Carpenter, 1864, *ex* Nuttall MS. Holotype figured. Valve interior figured. Distribution: Shelikof Strait, Alaska, to Bahía Magdalena, Baja California Sur, Mexico. Depth: intertidal zone to 168 m (Coan, 1973b). Add synonym: *Psammobia kazusensis* Yokoyama, 1922 (Bernard, 1983a). Length: 148.6 mm (Draper, 1987).
- 602 *Gari (G.) edentula* (Gabb, 1869). Synonym: *Tellina fucata* Hinds, 1845. Holotype and valve interior figured. Distribution: near Santa Barbara, to San Pedro, California, and possibly to Bahía Magdalena, Baja California Sur, Mexico (type locality of *Tellina fucata*). Depth: 5 to 137 m in fine sand (Coan, 1973b). Length: 136.5 mm (Draper, 1987).
- 603 *Gari (G.) helenae* Olsson, 1961. Distribution: 4°N-29°S, intertidal zone (Bernard, 1983a). Extend distribution north to San Felipe, Baja California, and Guaymas, Sonora, Mexico. Holotype figured. Hinge with "chondrophore" and resilium figured (Myers, Gemmell & Hertz, 1984). Depth: 35 m (F. & L. Poorman, 1988).
- 606 *Gari (G.) maxima* (Deshayes, 1855). Length: 125 mm (Wagner & Abbott, 1990).
- 607 *Gari (G.) panamensis* Olsson, 1961. Holotype figured. No "chondrophore" (Myers, Gemmell & Hertz, 1984). Extend distribution south to Isla Gorgona, Colombia (von Prael, 1986). Extend distribution north to Bahía San Carlos area, Sonora, Mexico. Depth: 20 to 35 m (F. & L. Poorman, 1988). Extend distribution south to Guayas, Ecuador (Skoglund, 1990b).
- 608 *Gari (G.) regularis* (Carpenter, 1864). Holotype figured. Distribution: Islas Coronados, Baja California, to Cabo San Lucas, Baja California Sur, Mexico, 18 to 37 m (Coan, 1973b). Holotype figured. No "chondrophore" or resilium (Myers, Gemmell & Hertz, 1984). Extend distribution into the Gulf of California in the Bahía San Carlos area, Sonora, Mexico. Intertidal zone (F. & L. Poorman, 1988). Length: 47.5 mm (Wagner & Abbott, 1990).

Genus *Heterodonax* Mörch, 1853

- 609 *Heterodonax pacificus* (Conrad, 1837). Extend distribution south to Tumbes, Peru (Peña, 1971). Lectotype figured. Distribution: Point Conception, California, and the entire Panamic Province to Peru. Depth: intertidal zone (Coan, 1973b).

## Subfamily SANGUINOLARIINAE

Genus *Sanguinolaria* Lamarck, 1799Subgenus *Sanguinolaria*, s. s.

- 610 *Sanguinolaria* (*S.*) *ovalis* Reeve, 1857. Length: 31 mm (Draper, 1987).

Genus *Nuttallia* Dall, 1908

- *Nuttallia nuttallii* (Conrad, 1837). Synonyms: *Psammobia decora* Hinds, 1852; *Sanguinolaria grandis* Carpenter, 1857, ex Gould MS; *S. orcutti* Dall, 1921. Lectotype figured. Distribution: Bodega Bay, California, to Bahía Magdalena, Baja California Sur, Mexico. Intertidal zone of protected bays (Coan, 1973b). Length: 131 mm (Draper, 1987).

## Subfamily SOLECURTINAE Orbigny, 1846

Genus *Solecurtus* Blainville, 1824

- 613 *Solecurtus lineatus* (Gabb, 1861). Synonym: *Solecurtus broggii* Pilsbry & Olsson, 1941. Distribution: 4°S-8°N (Bernard, 1983a).
- 614 *Solecurtus guaymasensis* Lowe, 1935. Extend distribution south to the Islas Galápagos, Ecuador (Finet, 1985). Length: 60.6 mm (Draper, 1987).

Genus *Tagelus* Gray, 1847Subgenus *Tagelus*, s. s.

- 615 *Tagelus* (*T.*) *affinis* (C.B. Adams, 1852). Lectotype figured. Distribution: Cayucos, California, to Ecuador. Intertidal in protected bays in mud, also reported to 73 m (Coan, 1973b). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a). Length: 62.8 mm (Draper, 1987).
- 616 *Tagelus* (*T.*) *californianus* (Conrad, 1857). Lectotype figured. Distribution: Humboldt Bay, California, to Baja California, and throughout

the Gulf of California, Mexico. Intertidal in muddy sand of protected bays (Coan, 1973b). Length: 128.3 mm (Draper, 1987).

- 617 *Tagelus* (*T.*) *dombeii* (Lamarck, 1818). Synonym: *Solecurtus coquimbensis* Sowerby, 1874. Anatomy figured (Villarroel & Stuardo, 1977).
- 619 *Tagelus* (*T.*) *longisinuatus* Pilsbry & Olsson, 1932. Anatomy figured (Villarroel & Stuardo, 1977).
- 620 *Tagelus* (*T.*) *peruanus* (Dunker, 1862). Correct date (Keen & Coan, 1975).
- 621 *Tagelus* (*T.*) *violascens* (Carpenter, 1857). Delete the last sentence, line 5, beginning, "The figure..." (Keen & Coan, 1975).

Subgenus *Mesopleura* Conrad, 1868

- 622 *Tagelus* (*M.*) *bourgeoisae* Hertlein, 1951. Extend distribution south to Tumbes, Peru (Peña, 1971). Distribution: 3°S-29°N (Bernard, 1983a). Distribution confirmed to Yavaros, Sonora, Mexico (García-Cubas & Reguero, 1987). Length: 49 mm (Draper, 1987).
- 623 *Tagelus* (*M.*) *peruvianus* Pilsbry & Olsson, 1971. Length: 80.1 mm (Draper, 1987).
- 624 *Tagelus* (*M.*) *politus* (Carpenter, 1857). Extend distribution south to Tumbes, Peru (Olsson, 1961). Correct date of synonym, *Siliquaria nitidissima*, to Dunker 1862 (Keen & Coan, 1975). Intertidal zone (Bernard, 1983a). Depth: 35 m (F. & L. Poorman, 1988). Include Islas Galápagos in distribution (Coan, pers. comm., 1990).

## Family SEMELIDAE

## Classification follows Coan (1988b)

Genus *Semele* Schumacher, 1817Subgenus *Semele*, s. s.

- 625 *Semele* (*S.*) *bicolor* (C.B. Adams, 1852). Holotype figured. Delete *Amphidesma striosum* and *A. ventricosum* C.B. Adams, 1852, as synonyms. Extend distribution south to Peru. Length to 31.3 mm. Depth: intertidal zone to 20 m (Coan, 1988b).
- 626 *Semele* (*S.*) *californica* (Reeve, 1853, ex A. Adams MS). Lectotype figured. Distribution: Bahía San Luis Gonzaga, Baja California, to Bahía Santa Maria, Baja California Sur; Isla Venado, Bahía Algodones, to Guaymas,

- Sonora, Mexico. Length: to 42 mm (Coan, 1988b).
- *Semele (S.) clydosa* Bernard, 1983. Synonym: *Amphidesma punctatum* Sowerby, 1833, *non* Say, 1822. Distribution: Islas Galápagos. Depth: intertidal to 5 m (Bernard, 1983a). Delete. Becomes a synonym of *Semele sowerbyi* Tryon, 1869 [642] (Coan, 1988b).
- 627 *Semele (S.) corrugata* (Sowerby, 1833). Lectotype figured. Synonym: *Amphidesma croceum* Gould, 1850. Length: 97.8 mm. Restrict distribution to Ecuador and Peru. Depth: intertidal zone to 9 m (Coan, 1988b).
- *Semele (S.) decisa* (Conrad, 1837). Holotype figured. Synonyms: *Amphidesma rubrolineatum* Conrad, 1837; *Semele rubroincta* Carpenter, "ex Conrad MS," 1857, *nom. nud.* Distribution: Santa Barbara County, California, to Cabo San Lucas, Baja California Sur, Mexico. Depth: intertidal zone to 46 m (Coan, 1973). Length: to 119.2 mm. Probably Bahía Magdalena, Baja California Sur, is southernmost record, as Cabo San Lucas record has not been verified in recent years (Coan, 1988b).
- 629 *Semele (S.) elliptica* (Sowerby, 1833). Extend distribution south to Tumbes, Peru (Peña, 1971). Lectotype figured. Distribution: Nicaragua to Ecuador (Coan, 1988b). Extend distribution north to Nayarit, Mexico (Reguero & García-Cubas, 1989).
- 630 *Semele (S.) flavescens* (Gould, 1851). Distribution: throughout the Gulf of California, Mexico, and south to Peru (Keen & Coan, 1975). Holotype figured (Gemmell, Myers & Hertz, 1987). Type locality corrected from San Diego, California, to Guaymas, Sonora, Mexico. Length: to 69 mm. Distribution: Isla Magdalena, Baja California Sur, throughout the Gulf of California, Mexico, to Peru. Depth: intertidal zone to 5 m (Coan, 1988b).
- 636 *Semele (S.) lenticularis* (Sowerby, 1833). Extend distribution north to Bahía de los Angeles, Baja California, Mexico (F. & L. Poorman, 1978). Extend distribution north to Puertecitos, Baja California, Mexico (Gemmell, Myers & Hertz, 1987). Synonym: *Amphidesma ventricosum* C.B. Adams, 1852. Holotype figured. Length: to 30.3 mm. Include entire Gulf of California, Mexico, in distribution. Depth: intertidal zone to 44 m (Coan, 1988b).
- 640 *Semele (S.) pilsbryi* Olsson, 1961. Holotype figured. Length: to 53.7 mm. Distribution: Guaymas, Sonora, Mexico, to Ecuador. Depth: intertidal zone to 18 m (Coan, 1988b).
- *Semele (S.) rubropicta* Dall, 1871. Lectotype figured. Synonym: *Semele ashleyi* Hertlein & Grant, 1972. Length: 52 mm. Distribution: Bahía Willard, Baja California, and possibly Guaymas, Sonora, in the Gulf of California, Mexico; Alaska to Isla Asunción on the Pacific coast of Baja California Sur, Mexico. Depth: intertidal zone to 55 m (Coan, 1988b).
- 642 *Semele (S.) sowerbyi* Tryon, 1869. Synonyms: *Amphidesma punctatum* Sowerby, 1833, *non* Say, 1822; *S. clydosa* Bernard, 1983 (Coan, 1988a). Lectotype of synonym, *Amphidesma punctatum*, figured. Length: 59.6 mm. Distribution restricted to the Islas Galápagos, Ecuador. Depth: intertidal zone to 13 m (Coan, 1988b).
- 650 *Semele (S.) tortuosa* (C.B. Adams, 1852). Holotype figured. Length: 56.2 mm. Extend distribution south to Puerto Parmar, Guayas Province, Ecuador. Depth: intertidal to 55 m (Coan, 1988b). Depth: 100 m (F. & L. Poorman, 1988).
- Subgenus *Amphidesma* Lamarck, 1818
- 628 *Semele (A.) craneana* Hertlein & Strong, 1949. Holotype figured. Length: 42 mm. Distribution: Roca Consag, in the upper Gulf of California; Isla Smith, Bahía de los Angeles, Baja California, to Los Frailes, Baja California Sur; Punta San Antonio, Sonora, on the Mexican mainland; Isla Clarión, Islas Revillagigedo, Mexico. Depth: 32 to 110 m (Coan, 1988b).
- 631 *Semele (A.) formosa* (Sowerby, 1833). Synonym: *Semele verruculastra* [653] (Coan, 1983b). Lectotype figured. Length: to 77 mm. Distribution: Isla San Pedro Martír, Gulf of California, Mexico, to Santa Elena, Ecuador; Isla del Coco, Costa Rica. Depth: 1.5 to 68 m (Coan, 1988b).
- 638 *Semele (A.) pallida* (Sowerby, 1833). Synonyms: *Semele paziana* Hertlein & Strong, 1949 [639]; *S. simplicissima* Pilsbry & Lowe, 1932 [647]; *S. regularis* Dall, 1915, *non* Smith, 1885. Lectotype figured. Length: 41.1 mm. Distribution: Gulf of California as far north as Bahía San Carlos, Sonora, and Bahía

Concepción, Baja California Sur, Mexico, to Tumbes Province, Peru. Depth: 13 to 128 m (Coan, 1988a).

- 639 *Semele paziana* Hertlein & Strong, 1949. Delete. Becomes synonym of *Semele pallida* (Sowerby, 1833) [638] (Coan, 1988a).
- 649 *Semele* (A.) *purpurascens* (Gmelin 1791). Synonym: *Semele sparsilineata* Dall, 1915. Distribution includes the Caribbean (Coan, 1988a). Add synonyms: *Tellina obliqua* Wood, 1815; *Amphidesma variegata* Lamarck, 1818. Lectotype of *Semele sparsilineata* figured. Length: 33.5 mm. Distribution: Bahía San Carlos, Sonora, Mexico, south to Ecuador, including the Islas Galápagos; Isla del Coco, Costa Rica; western Atlantic. Depth: intertidal zone to 78 m (Coan, 1988b).
- 647 *Semele simplicissima* Pilsbry & Lowe, 1932. Delete. Becomes synonym of *Semele pallida* (Sowerby, 1833) [638] (Coan, 1988a).
- 651 *Semele* (A.) *venusta* (Reeve, 1853, ex A. Adams, MS). Synonym: *Semele incongrua* Carpenter, 1864 (Coan, 1988a). Add synonym: *Semele pulchra* "var." *montereyi* Arnold, 1903. Lectotype figured. Length: 27.8 mm. Distribution: Monterey, California, and into the Gulf of California as far north as Isla Angel de la Guarda, Mexico, and south to Peru; Islas Galápagos, Ecuador. Depth: 10 to 183 m (Coan, 1988b).
- 653 *Semele verruculastra* Keen, 1966. Delete. Becomes a synonym of *Semele formosa* (Sowerby, 1833) [631] (Coan, 1983b).

Subgenus *Elegantula* de Gregorio, 1884

- *Semele* (E.) *rupicola* Dall, 1915. Synonym: *Amphidesma rupium* (Sowerby), *auctt.*, *non* (Sowerby, 1833). Lectotype figured. Distribution: South Farallon Island, California, to Cabo San Lucas, Baja California Sur, Mexico. Depth: intertidal zone to 27 m (Coan, 1973a). Lectotype figured. Length: 71.4 mm. Probably occurs no farther south than Bahía Magdalena, Baja California Sur, Mexico, as Cabo San Lucas record not verified in recent years. Depth: intertidal zone to 83 m (Coan, 1988b).
- 646 *Semele* (E.) *rupium* (Sowerby, 1833). Lectotype figured. Add Isla del Coco, Costa Rica, to distribution. Depth: 1 to 73 m (Coan, 1988b).

*Semele*, s. l.

- 648 *Semele barbarae* (Boone, 1928). Synonyms: *Semele sowerbyi* Lamy, 1912, *non* Tryon, 1869; *S. purpurascens* (Sowerby, 1833), *non* (Gmelin, 1791) (Coan, 1988a). Neotype figured. Length: 48.5 mm. Distribution: Guerrero, Mexico, to Guayas Province, Ecuador. Depth: 27 to 101 m (Coan, 1988b). Extend distribution north to Isla San Marcos, Gulf of California, Mexico (Hertz, 1991).
- 632 *Semele guaymasensis* Pilsbry & Lowe, 1932. Lectotype figured. Length: 27.8 mm. Distribution: Puerto Peñasco, Sonora, throughout the Gulf of California, and south to Bahía Chamela, Jalisco, Mexico. Depth: intertidal zone to 110 m (Coan, 1988b).
- *Semele jamesi* Coan 1988. Holotype figured. Length: 7.3 mm. Distribution: throughout the Gulf of California, Mexico, and south to Ecuador. Depth: 5 to 161169 m (Coan, 1988b).
- 633 *Semele jovis* (Reeve, 1853, ex A. Adams MS). Extend distribution north to between San Felipe and Roca Consag, Gulf of California, Mexico (Gemmell, Myers & Hertz, 1987). Synonym: ?*Tellina lamellata* Carpenter, 1857. Delete as synonym: ?*Tellina barbarae* Boone, 1928. Holotype figured. Length: 71.4 mm. Distribution: Bahía de Adair, Sonora, Mexico, to Puntarenas Province, Costa Rica. Depth: intertidal zone to 55 m (Coan, 1988b). Depth: 35 to 100 m (F. & L. Poorman, 1988).
- 634 *Semele junonia* (Verrill, 1870). Delete. Becomes synonym of *Semele rosea* (Sowerby, 1833) [644] (Coan, 1988a).
- 635 *Semele laevis* (Sowerby, 1833). Distribution: Mazatlán, Sinaloa, Mexico, to Ecuador (Keen & Coan, 1975). Add synonym: *Semele laevis costaricensis* Olsson, 1922. Length: 89.0 mm. Extend distribution north to Guaymas, Sonora, Mexico, and south to Peru. Depth: intertidal to 27 m (Coan, 1988b).
- 641 *Semele pulchra* (Sowerby, 1832). Lectotype figured. Synonym: *Semele quentinensis* Dall, 1921 [643]. Distribution: Point Mugu, California, to Peru. Depth: intertidal zone to 46 m. (Coan, 1973a). Add synonyms: *Amphidesma striosum* C.B. Adams, 1852; ?*Mesodesma rubrotincta* Gould, 1857, ex "Sowerby" MS, *nom. nud.* Length: 31.9 mm.

Depth: intertidal to 110 m (Coan, 1988b).

- 643 *Semele quentinensis* Dall, 1921. Delete. Becomes synonym of *Semele pulchra* (Sowerby, 1832) [641] (Coan, 1988b).
- 644 *Semele rosea* (Sowerby, 1833). Synonyms: *Semele junonia* (Verrill, 1870) [634]; *S. tabogensis* Pilsbry & Lowe, 1932 [645] (Coan, 1988a). Add synonyms: ?*Tellina regularis* Carpenter, 1857; *Semele leana* Dall, 1900. Lectotype figured. Length: 84.8 mm. Distribution: Bahía Magdalena, Baja California Sur, into the Gulf of California as far north as Bahía de los Angeles, Baja California, and Bahía San Carlos, Sonora, Mexico, and south to Peru. Depth: intertidal zone to 113 m (Coan, 1988b).
- 645 *Semele tabogensis* Pilsbry & Lowe, 1932. Delete. Becomes synonym of *Semele rosea* (Sowerby, 1833) [644] (Coan, 1988a).
- 652 *Semele verrucosa verrucosa* Mörch, 1860. Synonym: *Semele guaymasensis* Pilsbry & Lowe, auctt, non Pilsbry & Lowe, 1932. Lectotype figured. Length: 23.7 mm. Distribution: Nicaragua to Panama. Depth: intertidal zone to 23 m (Coan, 1988b).
- 637 *Semele verrucosa pacifica* Dall, 1915. Synonyms: *Semele jaramija* Pilsbry & Olsson, 1941; *S. hertleini* Durham, 1950. Holotype of *S. pacifica*, figured. Length: 26.6 mm. Distribution: Isla Cedros, Baja California, throughout the Gulf of California, and south to Oaxaca, Mexico. Depth: intertidal to 128 m (Coan, 1988b).

Genus *Abra* Lamarck, 1818, ex Leach MS

Subgenus *Abra*, s. s.

- *Abra* (*A.*) *californica* Knudsen, 1970. Length: 20.8 mm. Distribution: southern Baja California, Mexico. Depth: 3481 to 3518 m (Knudsen, 1970).

*Abra*, s. l.

Keen numbers 654 & 655 belong here (Bernard, 1983a).

- 654 *Abra palmeri* Dall, 1915. As a synonym of *A. tepocana* Dall, 1915 [655] (Abbott, 1974). A valid species (Bernard, 1983a).
- 655 *Abra tepocana* Dall, 1915.

Genus *Cumingia* Sowerby, 1833

- 656 *Cumingia adamsi* Olsson, 1961, ex Carpenter MS. Add MS (Keen & Coan, 1975).
- 657 *Cumingia lamellosa* Sowerby, 1833. Include the Islas Galápagos, Ecuador, in distribution (Finet, 1985). Length: 21.3 mm (Draper, 1987).
- 659 *Cumingia pacifica* (Dall, 1915). Distribution: north end of the Gulf of California to Guaymas, Sonora, Mexico (Keen & Coan, 1975).

Genus *Semelina* Dall, 1900

- 661 *Semelina subquadrata* (Carpenter, 1857). Depth: 35 m (F. & L. Poorman, 1988).

Superfamily SOLENACEA

Family SOLENIDAE

Genus *Solen* Linnaeus, 1758

Correct author from Scopoli, 1777 (Keen & Coan, 1975).

Subgenus *Solen*, s. s.

- 665 *Solen* (*S.*) *pazensis* Lowe, 1935. Distribution: 16°N-29°N (Bernard, 1983a). Delete. Becomes synonym of *Solen pfeifferi* Dunker, 1862 [666] (Gemmell, Myers & Hertz, 1987).
- 666 *Solen* (*S.*) *pfeifferi* Dunker, 1862. Extend distribution south to Tumbes, Peru (Peña, 1971). Synonym: *Solen pazensis* Lowe, 1935 [665]. Extend distribution north to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).
- 667 *Solen* (*S.*) *rosaceus* Carpenter, 1864. Depth: intertidal to 46 m (Hertlein & Grant, 1972).

Subgenus *Solena* Mörch, 1853

- 668 *Solen* (*S.*) *obliquus rudis* (C.B. Adams, 1852). Treated as a subspecies of the Caribbean *Solen* (*S.*) *obliquus* Spengler, 1794. Length: 160 mm (Woodring, 1982).

Family CULTELLIDAE Davies, 1935

Genus *Ensis* Schumacher, 1817

- 669 *Ensis nitidus* (Clessin, 1888). Synonym: *Ensis californicus* Dall, 1899. Restrict distribution to 25°N-30°N (Bernard, 1983a). Extend the

distribution north to San Felipe, Baja California, Mexico. Valve interior figured (Gemmell, Myers & Hertz, 1987). Length: 89 mm (Draper, 1987).

Order MYOIDEA  
Suborder MYINA  
Superfamily MYACEA  
Family MYIDAE  
Genus *Cryptomya* Conrad, 1848

- 671 *Cryptomya californica* (Conrad, 1837). Add synonyms: *Cryptomya oregonensis* Dall, 1919; *C. quadrata* Arnold, 1909; *C. washingtoniana* Weaver, 1912; *C. busoensis* Yokoyama, 1922; *Mya inopia* Hanna, 1924; *Cryptomya kamtschatica* Ilyina, 1963. Add northwest Pacific to distribution (Bernard, 1983a).

Genus *Sphenia*

- 673 *Sphenia luticola* (Valenciennes, 1846). Synonyms: *Sphenia fragilis* (H. & A. Adams, 1856); *S. trunculus* Dall, 1916; *S. pholadidea* Dall, 1916; *Cuspidaria nana* Oldroyd, 1918. Include the Islas Galápagos, Ecuador, in distribution. Depth: 10 to 55 m (Bernard, 1983a). Valve exterior and detail of ligament figured (Gemmell, Myers & Hertz, 1987).

Family CORBULIDAE  
Genus *Corbula* Bruguière, 1797  
Subgenus *Caryocorbula* Gardner, 1926

- 675 *Corbula* (*C.*) *luteola* Carpenter, 1854. As subgenus *Lentidium* Cristofori & Jan, 1832. Add synonym: *C. luteola rosea* Williamson, 1905, non Reeve, 1844 (Hertlein & Grant, 1972). Distribution: Monterey, California, to the Gulf of California, Mexico (McLean, 1978). In lagoons along the Sonoran coast of Mexico from Guaymas to Agiabampo (García-Cubas & Reguero, 1987).
- 676 *Corbula* (*C.*) *marmorata* Hinds, 1843. Distribution: 2°S-28°N (Bernard, 1983a). Depth: 35 m (F. & L. Poorman, 1988).
- 677 *Corbula* (*C.*) *nasuta* Sowerby, 1833. Depth: 90 m (Cruz-P., 1977).
- 678 *Corbula* (*C.*) *nuciformis* Sowerby, 1833. Extend distribution north to near Santa Rosalia, Baja

California Sur, Mexico (Draper, 1972). Extend distribution south to Peru (Abbott, 1974). Extend distribution across Gulf of California to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

- 680 *Corbula* (*C.*) *ovulata* Sowerby, 1833. Length: 25.8 mm (Draper, 1987).
- 681 *Corbula* (*C.*) *porcella* Dall, 1916. Extend distribution south to Esmeraldas, Ecuador (Cruz-P., 1977). Bernard (1983a) restricts distribution from 17°N to 33°N.

Subgenus *Hexacorbula* Olsson, 1932

- 683 *Corbula* (*H.*) *esmeralda* Olsson, 1961. Depth: 47 m (Cruz-P., 1977).

Subgenus *Juliacorbula*  
Olsson & Harbison, 1953

- 684 *Corbula* (*J.*) *bicarinata* Sowerby, 1833. Extend distribution south to Peru (Abbott, 1974). Depth to 9 m (Cruz-P., 1977). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).
- 685 *Corbula* (*J.*) *biradiata* Sowerby, 1833. Extend distribution south to Peru (Abbott, 1974). Include the Islas Galápagos, Ecuador, in distribution (Bernard, 1983a).
- *Corbula* (*J.*) *ecuabula* Pilsbry & Olsson, 1941. Length: 18 mm. Distribution: Punta Blanca, Ecuador, to Zorritos, Peru (Olsson, 1961).
- 686 *Corbula* (*J.*) *elenensis* (Olsson, 1961). Depth: 43 to 90 m (Cruz-P., 1977).
- 687 *Corbula* (*J.*) *ira* Dall, 1908. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Extend distribution south to Esmeraldas, Ecuador. Depth: 47 m (Cruz-P., 1977). Extend distribution north to Bahía de los Angeles, Baja California, Mexico (F. & L. Poorman, 1978). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico (F. & L. Poorman, 1988).

Subgenus *Serracorbula* Olsson, 1961

- 690 *Corbula* (*S.*) *tumaca* (Olsson, 1961). Extend distribution north to the Gulf of Fonseca, El Salvador (Hernández, 1979).

Subgenus *Tenuicorbula* Olsson, 1932

- 691 *Corbula* (T.) *tenuis* Sowerby, 1833.  
Distribution: 3°S-8°N (Bernard, 1983a).

Subgenus *Varicorbula* Grant & Gale, 1931

- 692 *Corbula* (V.) *speciosa* Reeve, 1843. Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 20 to 35 m (F. & L. Poorman, 1988).

## Family SPHENIOPSIDAE

Genus *Spheniopsis* Sandberger, 1861

- *Spheniopsis frankbernardi* Coan, 1990. Length: 3.2 mm. Distribution: Punta San Pablo, on the Pacific coast of Baja California Sur, to Cabo San Lucas; into the Gulf of California as far north as Puertecitos, Baja California, Mexico, and south to Playas del Coco, Guanacaste Province, Costa Rica. Depth: 13 to 91 m (Coan, 1990b).

Genus *Grippina* Dall, 1912

- 693 *Grippina californica* Dall, 1912. Synonym: *Grippina berryana* Keen, 1971. Holotype and hinge figured. Distribution: Santa Barbara County, California, to Isla Cedros, Baja California; in the Gulf of California as far north as Punta Gorda, Baja California Sur, Mexico, to Isla del Caño, Puntarenas Province, Costa Rica. Depth: intertidal zone to 42 m (Coan, 1990b).

## Superfamily GASTROCHAENACEA

## Family GASTROCHAENIDAE

Genus *Gastrochaena* Spengler, 1783

- *Gastrochaena denticulata* Deshayes, 1855. Distribution: 12°S-6°N, intertidal zone (Bernard, 1983a).
- 694 *Gastrochaena ovata* Sowerby, 1834. Anatomy figured. Add tropical west Atlantic to distribution (Carter, 1978). Add synonym: *Gastrochaena hyalina* Sowerby, 1834. Distribution: 1°S-28°N, including L'île Clipperton, (France), the Islas Galápagos, Ecuador; Atlantic (Bernard, 1983a).

- 695 *Gastrochaena rugulosa* Sowerby, 1834. Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985). Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 20 m (F. & L. Poorman, 1988).

- 696 *Gastrochaena truncata* Sowerby, 1834. Synonym: *Gastrochaena folini* Deshayes in Folin, 1867 (Bernard, 1983a).

## Superfamily HIATELLACEA

## Family HIATELLIDAE

Genus *Hiatella* Bosc, 1802, ex Daudin MS

- 697 *Hiatella arctica* (Linnaeus, 1767). Synonym: *Hiatella solida* (Sowerby, 1834) [698] and ca. 50 others worldwide. A cosmopolitan species that reaches an extreme size of ca. 70 mm in the arctic (Beu, 1971).
- 698 *Hiatella solida* (Sowerby, 1834). Delete. Becomes a synonym of *Hiatella arctica* (Linnaeus, 1767) [697] (Beu, 1971).

## Suborder PHOLADINA

## Superfamily PHOLADACEA

## Family PHOLADIDAE

## Subfamily PHOLADINAE

Genus *Pholas* Linnaeus, 1758Subgenus *Thovana* Gray, 1847, ex Leach MS

- 700 *Pholas* (T.) *chiloensis* Molina, 1782. Changed from subgenus *Pholas*. Add synonym: *P. macrostoma* Philippi, 1858 (Bernard, 1983a).

Genus *Barnea* Risso, 1826Subgenus *Anchomasa* Leach, 1852

- 701 *Barnea* (A.) *subtruncata* (Sowerby, 1834). Add synonym: *Pholas spathulata* Deshayes, 1843. Add subgenus (Kennedy, 1974). Distribution confirmed north in the Gulf of California to San Felipe, Baja California, Mexico (Gemmell, Myers & Hertz, 1987).

Genus *Cyrtopleura* Tryon, 1862

- 702 *Cyrtopleura crucigera* (Sowerby, 1834). Synonyms: *C. "crucifera,"* auctt., nom. null.; *C. exilis* (Tryon, 1870) (Abbott, 1974).

Genus *Zirfaea* Gray, 1842, ex Leach MS

- *Zirfaea pilsbryi* Lowe, 1931. Length: 120 mm. Distribution: Arctic coast of Alaska to Bahía Magdalena, Baja California Sur, Mexico (Kennedy, 1974). Depth: intertidal zone to 125 m (Bernard, 1983a).

## Subfamily JOUANNETIINAE

Genus *Jouannetia* DesMoulins, 1828Subgenus *Jouannetia*, s. s.

- 703 *Jouannetia* (*J.*) *duchassaingi* Fischer, 1862. Extend distribution north to Playa Naranjo, Costa Rica (Kemperman, 1990).

Genus *Pholadopsis* Conrad, 1849

Raised from subgenus (Kennedy, 1974).

- 704 *Pholadopsis pectinata* (Conrad, 1849). Distribution: Isla Cedros, Baja California, through the Gulf of California, Mexico, and south to Peru (Kennedy, 1974).

## Subfamily MARTESIINAE

Genus *Martesia* Sowerby, 1824Subgenus *Martesia*, s. s.

- 706 *Martesia* (*M.*) *fragilis* Verrill & Bush, 1898. Add synonym: *Pholadidea* (*Diploplax*) *exquisita* Bartsch & Rehder, 1945; *P. (D.) bahamensis* Bartsch & Rehder, 1945. Distribution: 9°N-20°N; also in Atlantic Ocean (Bernard, 1983a).
- 705 *Martesia* (*M.*) *striata* (Linnaeus, 1758). Add synonyms: *Pholas clavata* Lamarck, 1818; *P. tenuistriata* Blainville, 1826; *P. rosea* C.B. Adams, 1850; *P. cupula* Yokoyama, 1924; *Martesia striata tokyoensis* Yokoyama, 1927; *M. pulchella* Yokoyama, 1932; *M. hawaiiensis* Dall, Bartsch & Rehder, 1938; *Mesopholas intusgranosa* Take & Habe, 1945; *M. nucicola* Take & Habe, 1945; *Martesia (Diploplax) funiscola* Bartsch & Rehder, 1945; *M. (D.) americana* Bartsch & Rehder, 1945. Cosmopolitan in warm waters (Bernard, 1983a).

Subgenus *Particoma* Bartsch & Rehder, 1945

- 707 *Martesia* (*P.*) *cuniformis* (Say, 1822). Add Islas Galápagos, Ecuador, to distribution (Keen & Coan, 1975). Synonym: *Pholas caribaea* Orbigny, 1842. Add subgenus (Bernard, 1983a).

Genus *Diplothyra* Tryon, 1862

- 708 *Diplothyra curta* (Sowerby, 1834). Distribution restricted 17°N-30°N (Bernard, 1983a). Valve interior and exterior figured (Gemmell, Myers & Hertz, 1987).

Genus *Parapholas* Conrad, 1848

- 710 *Parapholas calva* (Sowerby, 1834). Distribution: 1°S-29°N, including the Islas Galápagos, Ecuador. Intertidal zone (Bernard, 1983a). Depth: 35 m (F. & L. Poorman, 1988).

## Subfamily XYLOPHAGAINAE

Genus *Xylophaga* Turton, 1822

- *Xylophaga globosa* Sowerby, 1835. Distribution: Panama to Chile (Kennedy, 1974).
- 715 *Xylophaga mexicana* Dall, 1908. Distribution: southern California to Acapulco, Guerrerro, Mexico (Kennedy, 1974).

## Family TEREDINIDAE

## Subfamily TEREDININAE

Genus *Teredo* Linnaeus, 1758Subgenus *Teredo*, s. s.

- 722 *Teredo* (*T.*) *bartschi* Clapp, 1923. Extend distribution to Laguna Caimanero (near Mazatlán), Sinaloa, Mexico (Hendrickx, 1980). Synonyms: *T. (Teredo) batilliformis* Clapp, 1924; *T. (T.) hiloensis* Edmonson, 1942. Cosmopolitan in warm water, floating (Bernard, 1983a).

Genus *Lyrodus* Gould

in Gould &amp; Binney, 1870

Pallets with a brown, easily shed periostracal cap (Keen &amp; Coan, 1975).

- *Lyrodus bipartitus* (Jeffreys, 1860). Distribution: Gulf of Panama; English Channel. Depth: 3270 to 3670 m (Knudsen, 1970).
- *Lyrodus pedicellatus* (Quatrefages, 1849). Synonyms: *Teredo chlorotica* Gould, 1870; *T. diegensis* Bartsch, 1916; *T. (Lyrodus) townsendi* Bartsch, 1922; *T. (Teredops) floridana* Bartsch, 1922; *T. (Teredops) hawaiiensis* Dall, Bartsch & Rehder, 1938. Cosmopolitan in warm waters, 5°S-38°N (Bernard, 1983a). See Turner (1966)

for many additional synonyms.

Genus *Psiloteredo* Bartsch, 1922

- 723 *Psiloteredo healdi* (Bartsch, 1931). Synonym: *Teredo* (*Neoteredo*) *miraflora* Bartsch, 1922, *nom. dub.* (Bernard, 1983a).

Genus *Uperotus* Guettard, 1770

- 724 *Uperotus panamensis* (Bartsch, 1922). Synonym: ?*Teredo lieberkindi* Roch, 1931. Include the Atlantic in distribution (Bernard, 1983a).

Subfamily BANKIINAE

Genus *Bankia* Gray, 1842

Subgenus *Bankiella* Bartsch, 1921

- 725 *Bankia* (*B.*) *gouldi* (Bartsch, 1908). Distribution: 25°N-28°N; Atlantic (Bernard, 1983a).

Subgenus *Neobankia* Bartsch, 1921

- *Bankia* (*N.*) *destructa* Clench & Turner, 1946. Distribution: Atlantic and Pacific sides of Central America (Abbott, 1974). Extend distribution north to Laguna Caimanero (near Mazatlán), Sinaloa, Mexico (Hendrickx, 1980).  
726 *Bankia* (*N.*) *orcutti* Bartsch, 1923. Synonym: *Nausitoria sajnakhaliensis* Rajagopal, 1964. Distribution: 26°N-28°N; Indo-Pacific (Bernard, 1983a).  
727 *Bankia* (*N.*) *zeteki* Bartsch, 1921. Extend distribution north to Teacapán, Sinaloa, Mexico (Hendrickx, 1980).

Subgenus *Plumulella* Clench & Turner, 1946

- 728 *Bankia* (*P.*) *cieba* Clench & Turner, 1946. Distribution: Greater Antilles to Colombia; Pacific side of Panama (Abbott, 1974).

Genus *Nausitoria* Wright, 1864

- 730 *Nausitoria dryas* (Dall, 1909). In line 3 read: "The shell is grayish white, often stained with reddish brown from boring in mangrove wood." (Keen & Coan, 1975).  
731 *Nausitoria excolpa* (Bartsch, 1922). Delete the

synonym and the last sentence of the paragraph (Keen & Coan, 1975).

Genus *Nototeredo* Bartsch, 1923

- *Nototeredo knoxi* (Bartsch, 1917). Bahía de Panama (Keen & Coan, 1975).

Subclass ANOMALODESMATA

Follows Yonge & Morton (1980) and Morton (1981).

Order PHOLADOMYOIDA

Superfamily PANDORACEA

Family PANDORIDAE

Genus *Pandora* Bruguière, 1797

Subgenus *Pandora*, s.s.

- 732 *Pandora* (*P.*) *brevifrons* Sowerby, 1835. Extend distribution north to Roca Consag, Gulf of California, Mexico (DuShane & Brennan, 1969). Valve interior and details of hinge figured (Gemmell, Myers & Hertz, 1987).  
733 *Pandora* (*P.*) *uncifera* Pilsbry & Lowe, 1932. Valve interior and details of hinge figured (Gemmell, Myers & Hertz, 1987). Depth: 35 to 50 m (F. & L. Poorman, 1988).

Subgenus *Clidiophora* Carpenter, 1864

- 734 *Pandora* (*C.*) *arcuata* Sowerby, 1835. Lectotype of synonym *Pandora* (*C.*) *claviculata* Carpenter, 1856, figured. Lectotype dentition figured. If Olsson's (1961) drawing of the dentition of *P. arcuata* is that species, it must be removed from the subgenus *Clidiophora* (Hertz, Myers & Gemmell, 1985).  
738 *Pandora* (*C.*) *cornuta* C.B. Adams, 1852. Bright red periostracum along ventral margin. Extend distribution north to San Felipe, Baja California, Mexico. Figured (Gemmell, 1975). Change subgenus from *Pandorella*. Holotype dentition figured. Distribution: Laguna de Scammon, Baja California Sur; the head of the Gulf of California at San Felipe, Baja California; Puerto Peñasco south to Guaymas, Sonora, Mexico; Panama (Hertz, Myers & Gemmell, 1985). Length: 35 mm (Wagner & Abbott, 1990).

Subgenus *Pandorella* Conrad, 1863

739 *Pandora (P.) granulata* Dall, 1915. Bernard (1983) restricts distribution from 24°N to 29°N.

740 *Pandora (P.) radiata* Sowerby, 1835. Distribution: 23°N-28°N (Bernard, 1983a).

#### Family LYONSIIDAE

Contains only three marine genera. Subgeneric taxa represent ecomorphs and should not be used (Prezant, 1981).

Genus *Lyonsia* Turton, 1822

742 *Lyonsia californica* Conrad, 1837. Add synonyms: *Lyonsia gouldii* Dall, 1915; *L. californica haroldi* Dall, 1915. Distribution: 17°N-55°N (Bernard, 1983a). Length: 26.9 mm (Draper, 1987). Extend distribution south to Bahía Cocos, Costa Rica (Skoglund, 1990a).

Genus *Entodesma* Philippi, 1845

Synonym: *Agriodesma* Dall, 1909 (Prezant, 1981).

744 *Entodesma inflatum* (Conrad, 1837). Delete. Becomes synonym of *Entodesma pictum* (Sowerby, 1834) [748] (Bernard, 1983a).

745 *Entodesma brevifrons* (Sowerby, 1834).

746 *Entodesma sechuranum* Pilsbry & Olsson, 1935. Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth: 20 m (F. & L. Poorman, 1988).

747 *Entodesma lucasanum* (Bartsch & Rehder, 1939). Delete subgenus *Phlycticoncha* (Prezant, 1981).

748 *Entodesma pictum* (Sowerby, 1834). Extend range south to Paita, Piura Province, Peru (Peña, 1971). Delete subgenus *Phlycticoncha* (Prezant, 1981). Add synonyms: *Lyonsia inflata* Conrad, 1837 [744]; *L. diaphana* Carpenter, 1856; *Entodesma spongiophila* Dall, 1871. Distribution: 4°S-37°N (Bernard, 1983a). Length: 32.2 mm (Draper, 1987). Anatomy figured (as *L. inflata*.) (Morton, 1987).

#### Superfamily THRACIACEA

Blainville, 1824, ex Leach MS

#### Family PERIPLOMATIDAE

Genus *Periploma* Schumacher, 1817

Subgenus *Periploma*, s. s.

--- *Periploma (P.) margaritaceum* (Lamarck, 1801).

Synonyms: *Periploma inaequivalvis* Schumacher, 1817, non *P. inequivalve* Schumacher, 1816, nom. nud.; *Anatina trapezoides* Lamarck, 1818; *Osteodesma trapezoidalis* Blainville, 1825, ex Lamarck MS; *Thracia inequalis* C.B. Adams, 1850. Interior figured. Length: 16.1 mm. Distribution: Bahía Chamela, Jalisco, Mexico; South Carolina to Texas; Caribbean (Bernard, 1989). Extend distribution from Punta Raza, Nayarit, to Bahía Cuastecomate, Jalisco, Mexico (Skoglund, 1991b).

753 *Periploma (P.) planiusculum* Sowerby, 1834. Length: 65.6 mm (Draper, 1987). Distribution: Point Conception, California, to Tumbes, Peru (Bernard, 1989).

Subgenus *Cricoploma* Bernard, 1989

749 *Periploma (C.) carpenteri* Dall, 1896. Extend distribution north to Bahía San Carlos, Sonora, Mexico. Depth to 100 m (F. & L. Poorman, 1988). Subgenus changed (Bernard, 1989).

750 *Periploma (C.) discus* Stearns, 1890. Holotype figured (Rosewater, 1980). Subgenus changed. Distribution restricted from 23°N to 37°N (Bernard, 1983a). Length: 37.4 mm (Draper, 1987). Interior figured (Bernard, 1989).

751 *Periploma (C.) largatillum* Olsson, 1961. Subgenus changed (Bernard, 1989).

752 *Periploma (C.) lenticulare* Sowerby, 1834. Extend distribution north to near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Subgenus changed. Add synonym: *Periploma obtusa* Hanley, 1842 (Bernard, 1989).

754 *Periploma (C.) stearnsii* Dall, 1896. Holotype figured (Rosewater, 1980). Subgenus changed (Bernard, 1989).

755 *Periploma (C.) teevani* Hertlein & Strong, 1946. Subgenus changed (Bernard, 1989).

Genus *Albimanus* Pilsbry & Olsson, 1935

Raised from subgenus (Bernard, 1989).

756 *Albimanus pentadactylus* (Pilsbry & Olsson, 1935). Extend distribution north to El Salvador (Hernández, 1979). Holotype figured. Interior figured (Bernard, 1989).

Genus *Halistrepta* Dall, 1904

Raised from subgenus (Bernard, 1989).

- 757 *Halistrepta myrae* (Rogers, 1962). Holotype figured (Bernard, 1989).

Family THRACIIDAE

Follows Coan (1990a).

Genus *Thracia* Blainville, 1824, ex Leach MS  
Correct author from Sowerby, 1823 (Coan, 1990a).

Subgenus *Ixartia* Gray, 1852

- 758 *Thracia* (*I.*) *anconensis* Olsson, 1961. Holotype figured. Subgenus added (Coan, 1990a).  
760 *Thracia* (*I.*) *curta* Conrad, 1857. Subgenus changed. Restrict distribution 23°N-45°N (Bernard, 1983a). Synonyms: *Lepton clementinum* Carpenter, 1857; *Thracia quentinensis* Dall, 1921. Holotype figured. Length: 53 mm. Restrict distribution from the San Juan Islands, Washington, to Punta Quepos, Puntarenas Province, Costa Rica. Depth: intertidal zone to 48 m (Coan, 1990a).

Subgenus *Odoncineta* Costa, 1829

- *Thracia* (*O.*) *bereniceae* Coan 1990. Holotype figured. Length: 17.5 mm. Distribution: Bahía Cholla, Sonora, Mexico, to Bahía Ballena, Gulf of Nicoya, Costa Rica. Depth: intertidal zone to 46 m (Coan, 1990a).  
761 *Thracia* (*O.*) *squamosa* Carpenter, 1856. Subgenus added. Holotype figured. Length: 36 mm. Extend distribution south to Islas Las Perlas, Panama. Depth: intertidal zone to 61 m (Coan, 1990a).

Genus *Asthenothaerus* Carpenter, 1864

Subgenus *Asthenothaerus*, s. s.

- *Asthenothaerus* (*A.*) *diegensis* (Dall, 1915). Lectotype figured. Length: 11.0 mm. Distribution: San Pedro, Los Angeles County, California, to Bahía Magdalena, Baja California Sur, Mexico; Bahía de los Angeles, Baja California; Guaymas, Sonora, Mexico. Depth: intertidal zone to 119 m (Coan, 1990a).  
762 *Asthenothaerus* (*A.*) *villosior* Carpenter, 1864. Extend distribution into the Gulf of California near Santa Rosalia, Baja California Sur, Mexico (Draper, 1972). Extend distribution across the Gulf of California to Bahía San Carlos, Sonora, Mexico. Depth: 35 m (F. & L. Poorman,

1988). Holotype figured. Delete *Thracia diegensis* Dall, 1915, as a synonym. Distribution: Isla Cedros, Baja California, throughout the Gulf of California, Mexico, and south to Punta Quepos, Puntarenas Province, Costa Rica. Depth: intertidal zone to 73 m (Coan, 1990a).

Subgenus *Skoglundia* Coan, 1990

- 759 *Asthenothaerus* (*S.*) *colpoica* (Dall, 1915). Genus changed from *Thracia* and subgenus added. Holotype figured. Length: 23.7 mm. Distribution: Guaymas, Sonora, and La Paz, Baja California Sur, Mexico, south to Tumbes Province, Peru. Intertidal zone on mud flats (Coan, 1990a).

Genus *Bushia* Dall, 1886

Subgenus *Bushia*, s. s.

- *Bushia* (*B.*) *galapagana* (Dall, 1915). Known only from the Islas Galápagos, Ecuador (Coan, 1989). Holotype figured. Length: 25.9 mm. Known only from Isla del Coco, Costa Rica, and the Islas Galápagos, Ecuador. Depth: 57 to 83 m (Coan, 1990a).  
763 *Bushia* (*B.*) *panamensis* (Dall, 1890). Add parentheses to author's name (Coan, 1990a).  
--- *Bushia* (*B.*) *phillipsi* Coan, 1990. Holotype figured. Length: 23 mm. Known only from Isla Smith, Bahía de los Angeles, Baja California, and Isla Danzante, Gulf of California, Mexico. Depth: 38 to 183 m (Coan, 1990a).

Subgenus *Pseudocyathodonta* Coan, 1990

- *Bushia* (*P.*) *draperi* Coan, 1990. Holotype figured. Length: 28.5 mm. Isla Danzante, Gulf of California, Mexico. Depth: 61 m. Known only from the holotype (Coan, 1990a).

Genus *Cyathodonta* Conrad, 1849

- 764 *Cyathodonta dubiosa* Dall, 1915. Synonym: *Cyathodonta pedroana* Dall, 1915 (Bernard, 1983a). Delete *C. pedroana* Dall, 1915, as a synonym. Holotype figured. Length: 40.2 mm. Distribution: Isla Smith, Bahía de los Angeles, Baja California, and Punta San Antonio,

Sonora, to Puerto Guatulco, Oaxaca, Mexico. Depth: 13 to 183 m. Keen (1971, fig. 765) is this species (Coan, 1990a).

- 765 *Cyathodonta lucasana* Dall, 1915. Delete. Becomes a synonym of *Cyathodonta undulata* Conrad, 1849 [766] (Coan, 1990a).
- *Cyathodonta pedroana* (Dall, 1915). Lectotype figured. Length: 38 mm. Distribution: Monterey Bay, California, to Bahía Magdalena, Baja California Sur, Mexico. Depth: 9 to 114 m (Coan, 1990a).
- *Cyathodonta tumbeziana* Olsson, 1961. Holotype figured. Length: 37.6 mm. Distribution: Puerto Madero, Chiapas, Mexico, to Máncora, Tumbes Province, Peru. Depth: 13 to 26 m (Coan, 1990a).
- 766 *Cyathodonta undulata* Conrad, 1849. Lectotype figured. Synonym: *Cyathodonta lucasana* Dall, 1915 [765]. Delete as a synonym: *C. tumbeziana* Olsson, 1961. Length: 50.2 mm. Distribution: Bahía Magdalena, Baja California Sur, throughout the Gulf of California, Mexico, and south to Punta Organos, Peru; Islas Galápagos, Ecuador. Intertidal zone (Coan, 1990a). Length: 52.3 mm (Wagner & Abbott, 1990).

#### Superfamily POROMYACEA

##### Family POROMYIDAE

Genus *Poromya* Forbes, 1844

Subgenus *Poromya*, s. s.

- 767 *Poromya* (*P.*) *perla* Dall, 1908. Length: 13.8 mm. Anatomy figured. Distribution: California (32°N) to Ecuador (3°N). Depth: 1994 to 3500 m (Knudsen, 1970). As subgenus *Cetoconcha*. Holotype figured. Distribution: Gulf of Panama to Ecuador (Bernard, 1974). Subgenus changed from *Cetoconcha*. Distribution: 3°N-24°N (Bernard, 1983a).

##### Subgenus *Cetoconcha* Dall, 1886

- 768 *Poromya* (*C.*) *scapha* (Dall, 1902). Holotype figured. Known only from the type locality (Bernard, 1974).
- 769 *Poromya* (*C.*) *smithi* (Dall, 1908). Holotype figured. Distribution: Acapulco, Guerrero, Mexico, to Patagonia, Argentina. Depth: 302 to 3439 m (Bernard, 1974). Distribution

restricted to 15°N (Bernard, 1983a).

##### Subgenus *Dermatomya* Dall, 1889

- 770 *Poromya* (*D.*) *equatorialis* Dall, 1908. Holotype figured (Bernard, 1974).
- 771 *Poromya* (*D.*) *mactroides* Dall, 1889. Holotype figured (Bernard, 1974).

#### Family CUSPIDARIIDAE

Genus *Cuspidaria* Nardo, 1840

Subgenus *Cuspidaria*, s. s.

- 772 *Cuspidaria* (*C.*) *chilensis* Dall, 1908. Holotype figured (Bernard, 1974).
- *Cuspidaria* (*C.*) *haasi* Knudsen, 1970. Length: 34.2 mm. Anatomy figured. Distribution: off central America. Depth: 3570 m (Knudsen, 1970). Holotype figured. Known only from the type locality (Bernard, 1974).
- 773 *Cuspidaria* (*C.*) *panamensis* Dall, 1908. Holotype figured (Bernard, 1974). Bernard (1983a) restricts distribution to 7°N. Depth: 100 m (F. & L. Poorman, 1988).
- 774 *Cuspidaria* (*C.*) *parapodema* Bernard, 1969. Holotype, anatomy and hinge figured (Bernard, 1974).
- *Cuspidaria* (*C.*) *parkeri* Knudsen, 1970. Length: 19.2 mm. Anatomy figured. Distribution: Gulf of California, Mexico (23°N). Depth: 2800 m (Knudsen, 1970). Holotype figured. Known only from the type locality (Bernard, 1974).
- 775 *Cuspidaria* (*C.*) *patagonica* (E. A. Smith, 1885). Holotype figured (Bernard, 1974). Delete. Distribution restricted to 50°S (Bernard, 1983a).

#### Genus *Cardiomya* A. Adams, 1864

- *Cardiomya balboae* (Dall, 1916). Holotype figured. Distribution: California. Depth: 55 to 128 m (Bernard, 1974). Distribution: 0°-34°N, including the Islas Galápagos, Ecuador. Depth: 45-170 m (Bernard, 1983a).
- 776 *Cardiomya californica* (Dall, 1886). Holotype and hinge figured (Bernard, 1974).
- 777 *Cardiomya costata* (Sowerby, 1834). Hinge figured (Bernard, 1974). Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985). Length: 9.1 mm (Draper, 1987).

- 778 *Cardiomya didyma* (Hinds, 1843). Neotype figured (Bernard, 1974).
- 779 *Cardiomya ecuadoriana* (Olsson, 1961). Hinge figured. Distribution: Isla Angel de la Guarda, Gulf of California, Mexico, to Isla La Plata, Ecuador. Depth: 55 to 146 m (Bernard, 1974).
- 780 *Cardiomya isolirata* Bernard, 1969. Holotype figured (Bernard, 1974).
- 781 *Cardiomya lanieri* (Strong & Hertlein, 1937). Hinge figured (Bernard, 1974). Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985).
- 782 *Cardiomya pectinata* (Carpenter, 1864). Holotype figured. Delete. Distribution (28°N-60°N) is north of the Panamic Province (Bernard, 1974).
- 783 *Cardiomya planetica* (Dall, 1908). Holotype figured. Delete. Distribution (28°N-60°N) is north of the Panamic Province (Bernard, 1974).
- 784 *Cardiomya pseustes* (Dall, 1908). Length: 27 mm. Knudsen (1970) regards *C. planetica* (Dall, 1908) as a synonym. Holotype figured (Bernard, 1974). Distribution: 7°N-49°N (Bernard, 1983a).

Genus *Myonera* Dall & Smith, 1886

- 785 *Myonera garretti* Dall, 1908. Holotype figured. Synonym: *M. mexicana* Knudsen, 1970 (Bernard, 1974). Delete *M. mexicana* Knudsen, 1970, as a synonym (Bernard, 1983a).
- *Myonera mexicana* Knudsen, 1970. Length: 21.8 mm. Valve interior and anatomy figured. Distribution: Mexico (14°N). Depth: 3529 m (Knudsen, 1970). Regarded as a synonym of *M. garretti* Dall, 1908 (Bernard, 1974). A valid species with a distribution of 14°N-57°N and a depth of 1110 to 3557 m (Bernard, 1983a).

Genus *Plectodon* Carpenter, 1864

- 786 *Plectodon scaber* Carpenter, 1864. As *Leiomya* (*Plectodon*). Anatomy figured. Extend distribution north to Santa Barbara, California (Bernard, 1974). *Plectodon* as a genus (Bernard, 1983a). Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985).

Superfamily VERTICORDIACEA Bernard, 1974  
Family VERTICORDIIDAE

Genus *Verticordia* Sowerby, 1844, ex Wood MS  
Subgenus *Verticordia*, s. s.

- 787 *Verticordia* (*V.*) *aequacostata* A. Howard, 1950. Delete here. Genus changed. See *Haliris*.
- 788 *Verticordia* (*V.*) *hancocki* Bernard, 1969. Holotype figured. As subgenus *Trigonulina*. Known only from the type locality (Bernard, 1974). As subgenus *Verticordia* (Bernard, 1983a).
- 789 *Verticordia* (*V.*) *ornata* (Orbigny, 1846). As subgenus *Trigonulina*. Synonym: *Verticordia coelata* Verrill, 1884 (Bernard, 1974). As subgenus *Verticordia*. Synonym: ?*Hippagus novemcostatus* A. Adams & Reeve, 1850 (Bernard, 1983a). Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985).

Genus *Halicardia* Dall, 1895

- As a subgenus of *Verticordia* (Bernard, 1974) and as a genus (Bernard, 1983a).
- 791 *Halicardia perplicata* (Dall, 1890). Anatomy figured. Add to distribution: Cabo San Lucas, Baja California Sur, Mexico (Bernard, 1974).

Genus *Haliris* Dall, 1886

- As a genus (Bernard, 1971), a subgenus (Bernard, 1974), and a genus (Bernard, 1983a).
- 787 *Haliris aequacostata* (Howard, 1950). Holotype figured. Subgenus changed to *Trigonulina*. Add Islas Galápagos, Ecuador, to distribution (Bernard, 1974). Genus changed from *Verticordia* (*Trigonulina*) (Bernard, 1983a). Occurrence in the Islas Galápagos, Ecuador, doubtful (Finet, 1985).
- 790 *Haliris spinosa* Bernard, 1969. Holotype figured. Known only from the type locality (Bernard, 1974).

Genus *Lyonsiella* M. Sars, in G. Sars, 1872

- 792 *Lyonsiella magnifica* Dall, 1913. Holotype figured. Known only from the type locality (Bernard, 1974).

Genus *Policordia* Dall, Bartsch, & Rehder, 1939  
Shell ovate, with fine radial ribs; edentulous; ligament in a groove (Keen & Coan, 1975).  
Synonymized with *Lyonsiella* by Bernard (1974).

--- *Policordia alaskana* (Dall, 1895). Length: 24 mm. Distribution: 9°N-55°N. Depth: 1097 to 3570 m (Knudsen, 1970). Holotype and anatomy figured (as *Lyonsiella alaskana*).

Distribution: Sitka, Alaska, to British Columbia, Canada; Santa Catalina Island, California (Bernard, 1974). As *Policordia*. Distribution 9°N-55°N (Bernard, 1983a).

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